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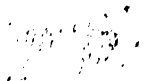
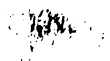
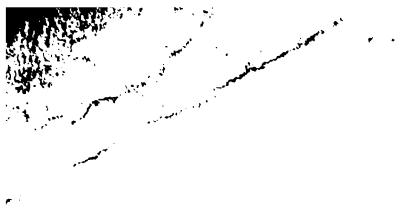
TECHNICAL SERVICE MANUAL



SUPPLEMENT

1953 Series

1953



FOREWORD

The following product information will provide complete Nash Service Information when used in conjunction with the 1952 Series Nash Technical Service Manuals.

This product information should be kept in a convenient location together with the 1952 Technical Service Manuals so that complete information will be available for prompt model and series references.

NASH MOTORS
DIVISION OF NASH-KELVINATOR CORPORATION
DETROIT 32, MICHIGAN

TECHNICAL SERVICE MANUAL



SUPPLEMENT 1953 Series

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N A S H M O T O R S
DIVISION OF NASH-KELVINATOR CORPORATION
Detroit 32, Michigan, U. S. A.

Starting (1953 Series) Serial Numbers:

	Ambassador	Statesman	Rambler
Kenosha	R-692101	K-563501	D-127501
El Segundo	RC-19001	KC-43001	DC-9001
Canada		KT-6901	DT-1901

Starting (1953 Series) Engine Numbers:

Ambassador	Statesman	Rambler
A-210001	S-365001	F-140001

ENGINE SECTION

“AMBASSADOR” SERIES

(Dual Jetfire)

The 1953 Series Le Mans Dual Jetfire “Ambassador” engine has been increased to 140 H.P. @ 4,000 R.P.M. as the result of camshaft redesign. This provides an earlier and longer intake valve opening, thereby increasing engine efficiency in conjunction with the dual carburetor type induction system.

“Statesman” and “Rambler” Series

Improvements have been made in the 1953 “Statesman” and “Rambler” power plants to increase power and efficiency. These changes deal primarily with the increasing of the volumetric efficiency of the engines. The volumetric efficiency of an engine, of course, is that engine’s ability to fully fill the volume of the cylinder on the intake stroke and fully empty the cylinder on the exhaust stroke.

In the “Statesman” and “Rambler” engine, changes were made in the valve train and induction system to improve the volumetric efficiency. The intake valve head diameter was increased approximately $\frac{1}{8}$ ” in diameter. The exhaust valve head diameter was increased approximately $\frac{1}{16}$ ”. These increased valve openings naturally permit greater breathing of the engine. It can take in a larger amount of fuel and air and also exhaust the cylinders more completely. The valve porting

(passages to and from combustion chambers) have been greatly improved on the induction system side and somewhat improved on the exhaust side. The camshaft has been redesigned to provide an earlier and longer duration of opening and also a higher lift of the intake valves to more fully charge the cylinders.

In the “Statesman” Series, the cylinder head has been changed to give a higher compression ratio and a greater area to the induction chambers. A new type (Dual-flo) double barreled WCD Carter Carburetor is used with the improved induction system with much improvement in fuel air distribution to cylinders.

The same engineering improvements incorporated on the “Statesman” were applied to the “Rambler” engine with the following exceptions:

Carburetor

Model “YF” used on the “Rambler” Series.

Cylinder Head

Compression ratio unchanged.

Displacement

Increased on “Rambler” Series to 184 cu. in. by increasing the stroke to 4”.

The 1953 engineering improvements applied to the Power Flyte Engine in the “Statesman,” and the Flying Scot Engine of the “Rambler” increased the brake horsepower to 100 H.P. and 85 H.P. respectively.

ENGINE SPECIFICATIONS

Series	“Ambassador” Dual Jetfire Jetfire		“Statesman”	“Rambler”
Type	Valve-In Head	Valve-In Head	L-Head	L-Head
No. of Cylinders	6	6	6	6
Bore	3½”	3½”	3⅛”	3⅛”
Stroke	4⅜”	4⅜”	4¼”	4”
Compression Ratio	8.0-1	7.3-1	7.45-1	7.25-1
Piston Displacement—Cu. In.	252.6	252.6	195.6	184.0
Compression Pressure at Cranking Speed	130#	120#	120#	120#
Taxable Horsepower	29.4	29.4	23.44	23.44
Horsepower SAE Brake	140 @ 4000 R.P.M.	120 @ 3700 R.P.M.	100 @ 3800 R.P.M.	85 @ 3800 R.P.M.
Maximum Torque	230 @ 2000 R.P.M.	220 @ 1600 R.P.M.	155 @ 1600 R.P.M.	150 @ 1600 R.P.M.
Engine Lubrication	Pressure	Pressure	Pressure	Pressure

ENGINE SECTION

OIL SYSTEMS

Series	"Ambassador"	"Statesman"	"Rambler"
Oil Pump Type	Gear	Gear	Gear
Normal Oil Pressure	30# @ 20 M.P.H. 12# Min. @ 600 R.P.M.	30# @ 20 M.P.H. 12# Min. @ 600 R.P.M.	30# @ 20 M.P.H. 12# Min. @ 600 R.P.M.
Oil Pressure Release	50-58#	50-58#	50-58#
Engine Oil Refill Capacity	6 Qts.	4 Qts.	4 Qts.

CRANKSHAFT AND BEARINGS

Series	"Ambassador"	"Statesman" and "Rambler"
Bearing Type	Replaceable	Replaceable
No. of Main Bearings	7	4
Main Bearing Clearance	.001" — .002"	.001" — .002"
Diameter	2.479"	2.479"
Shaft End Play	.006" — .008"	.006" — .008"
End Thrust Taken By	Center Main Bearing	Front Main Bearing
Bearing Cap Adjustment	66-70 Ft. Lbs. (Dry)	66-70 Ft. Lbs. (Dry)

VALVE SPECIFICATIONS

Series	"Ambassador"	"Statesman" and "Rambler"
Stem Diameter — Intake Exhaust	.3725" — .3735" .3720" — .3730"	.3407" — .3412" .3407" — .3412"
Stem to Guide Clearance	.002" — .004"	.002" — .003"
Head Diameter Intake	1.787"	1.594"
Head Diameter Exhaust	1.468"	1.343"
Seat Angle	45° Ex. 30° Int.	45°
Valve Face Angle	44° Ex. 29° Int.	44°
Valve Spring Free Height	2 $\frac{1}{16}$ "	2 $\frac{5}{32}$ "
Valve Spring Pressure — Valve Open Valve Closed	144-154# @ 1 $\frac{7}{16}$ " 53-58# @ 1 $\frac{13}{16}$ "	75-82# @ $\frac{7}{16}$ " 37-41# @ 1 $\frac{3}{4}$ "
Spring Retainer Lock	Split Two-Piece	Single Horseshoe
Tappet Clearance (Running Hot) Intake Exhaust	.012" .016"	.015" .015"
Cold Setting — Intake Exhaust		.016" .018"

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PISTON RINGS

Series	"Ambassador"	"Statesman" and "Rambler"
No. of Rings Per Piston	4	4
End Gap Minimum (Except "U" Flex Ring)	.007"	.010"
Compression Ring Width	.0930" — .0935"	.0930" — .0935"
Oil Ring Width	.1545" — .1550"	.1545" — .1550"
Compression Ring, Side Clearance in Ring Groove	.002" to .004"	.002" to .004"
Oil Ring, Side Clearance in Ring Groove	.002" to .004"	.002" to .004"

CONNECTING ROD AND BEARING

Series	"Ambassador"	"Statesman" and "Rambler"
Bearing Type	Replaceable	Replaceable
Bearing Clearance	.001" — .0025"	.001" — .0025"
Crank Pin Diameter	2.000"	2.094"
Bearing End Play	.005" — .015"	.005" — .015"
Bearing Cap Adjustment	52-56 Ft. Lbs. (Dry)	27-30 Ft. Lbs. (Dry)

TUNE-UP DATA

Series	Plug Gap	Tappet Clr. Hot	Dist. Point Gap	Dwell Angle	Ignition Timing (Vibration Damper)
"Ambassador"	.030"	Int. .012" Ex. .016"	.018" — .024"	31-37°	T.D.C.
"Statesman"	.030"	.015"	.018" — .024"	31-37°	4° A.T.D.C.
"Rambler"	.030"	.015"	.018" — .024"	31-37°	T.D.C.

Engine Idle Speed —

500-550 R.P.M. (Std. and O.D.)

550-650 R.P.M. (Dual Jetfire)

375 R.P.M. Exact (Hydra-Matic)

Selector lever in neutral position. En-
gine at normal operating temperature.

Compression pressure at cranking speed 120 lbs.
(130# Dual Jetfire)

Spark advance (See Electrical Specifications —
Distributor).

Firing Order — 1, 5, 3, 6, 2, 4.

Positive battery terminal grounded.

Coil — Secondary terminal tower, negative
polarity.

Breaker point spring tension, distributor 17-21
ozs.

Spark Plugs — Auto-Lite — A-7

14 MM. Thread

30 Lbs. Maximum Torque

"Ambassador" Dual Jetfire AL-5 — 14 MM.
— 25 Lbs. Torque.

Cylinder Head Stud Nut Torque Specifications:

"Ambassador" Series —

65-70 Ft. Lbs. (Cast Iron)

Dual Jetfire —

55-60 Ft. Lbs. — (Aluminum — Cold)

"Statesman" and "Rambler" Series —

57-60 Ft. Lbs.

ELECTRICAL SECTION

SPECIFICATIONS:

BATTERY

Series	"Ambassador"	"Statesman" and "Rambler"
Make	Auto-Lite	Auto-Lite
Model	CT-1-15	IM-100
Ampere Hours: 20 Hour Rating	105	100
Amperes: 20 Minute Rating	133	
No. of Plates	15	15

GENERATOR

Series	"Ambassador" and "Statesman"	"Rambler"
Make	Delco-Remy	Delco-Remy
Model	1102777	1100021
Type	Shunt	Shunt
Rotation	R. H. Drive End	R. H. Drive End
Brush Spring Tension	28 Oz.	28 Oz.
Maximum Controlled Charging Rate (Controlled by Current Setting)	47 Amperes	38 Amperes

VOLTAGE AND CURRENT REGULATOR

Series	"Ambassador" and "Statesman"	"Rambler"
Make	Delco-Remy	Delco-Remy
Model	1118732	1118731
Cut-Out Relay Voltage at Closing	5.9 — 6.7 Adjust to 6.4	5.9 — 6.7 Adjust to 6.4
Air Gap	.20"	.20"
Voltage Regulator Volts	7.0 — 7.7 Adjust to 7.4	7.0 — 7.7 Adjust to 7.4
Air Gap	.075"	.075"
Current Regulator Amperes	45 — 51 Adjust to 47	34 — 42 Adjust to 38
Air Gap	.075"	.075"

Series	“Ambassador”		“Statesman” and “Rambler”
	Reg. Trans. and Overdrive	With Hydra- Matic	
Make	Delco-Remy	Delco-Remy	Delco-Remy
Model	1107950	1108007	1107119 (Std. & O.D.) 1107121 (Hydra-Matic) “Statesman”
Brush Spring Tension	24 — 28 Ozs.	24 — 28 Ozs.	24 — 28 Ozs.
Lock Test Amperage Draw	570	550	550
Volts	3.15	3.25	3.25
Torque in Foot-Pounds	14	11	11
No Load Test Amperage Draw	70	70	70
Volts	5.65	5.65	5.65
R.P.M.	5500	5500	5500

Make Delco-Remy
Model 1112382
Rotation..... Clockwise at Drive End
Cam Angle..... 31 to 37 Degrees
Contact Point Pressure..... 17 to 21 Ounces
Contact Point Opening..... .022"
Condenser Capacity..... .18 to .23 Mfd.
Automatic Advance.. Start at 4.0 Engine Degrees
 at 600 Engine R.P.M.
Intermediate... .. 4 to 8 Engine Degrees at
 800 Engine R.P.M.
Maximum..... 18 to 22 Engine Degrees at
 2400 Engine R.P.M.

Vacuum Advance

Make Delco-Remy
Model 1116072
Advance.. 4 to 6 Inches Vacuum to Start Travel
 11 Inches Vacuum for 9 to 13 Degrees
 Engine Advance ($\frac{15}{16}$ " Travel)

Series	“Ambassador”		“Statesman”	“Rambler”
	Dual Jetfire	Jetfire		
Timing, Breaker Points Open	T.D.C.	T.D.C.	4° A.T.D.C.	T.D.C.
Timing Mark Location	Vibration Damper	Vibration Damper	Vibration Damper	Vibration Damper
Firing Order	1, 5, 3, 6, 2, 4	1, 5, 3, 6, 2, 4	1, 5, 3, 6, 2, 4	1, 5, 3, 6, 2, 4
Spark Plug	AL-5	A-7	A-7	A-7
Thread	14 MM.	14 MM.	14 MM.	14 MM.
Spark Plug Gap	.030"	.030"	.030"	.030"

CARBURETOR SECTION

"Ambassador" Series (Jetfire) "YH" Horizontal Climatic Control (Carter "YH" 895-SA)

SPECIFICATIONS:

Dimensions:

Flange size, $1\frac{1}{4}$ " 3 bolt. Primary venturi, $1\frac{1}{32}$ " I.D. Secondary venturi, $1\frac{1}{16}$ " I.D. Main venturi, $1\frac{5}{16}$ " I.D.

Float Level:

Distance from float (at free end) to float chamber cover, with free weight of float on needle and spring to be $\frac{3}{8}$ ".

Vents:

Outside, none. Inside balance vent tube to air horn ahead of choke valve.

Gasoline Intake:

Square vertical, spring loaded, needle. Size No. 46 (.081") drill, in needle seat.

Low Speed Jet Tube:

Jet size No. 70 (.028") drill. Bypass in body, size 1.25 mm (.0492") drill. Economizer, size No. 54 (.055") drill. Idle bleed size No. 58 (.042") drill.

Idle Ports:

Upper port, slot type; length .162". Width, .030".

Idle Port Opening:

Top of port: .124" to .128", above top edge of valve with valve tightly closed. Lower port size: .0615" to .0655" diameter (for idle adjusting screw).

Set Idle Adjustment Screws:

$\frac{1}{2}$ to $1\frac{1}{2}$ turns open. For richer mixture, turn screw out. Do not idle engine below 550 r.p.m. For Hydra-Matic do not idle engine below 375 r.p.m.

Main Nozzle:

In primary venturi, angle 35° off vertical. Discharge jet size: .086" inside diameter.

Metering Rod (Diaphragm Type):

Economy step .0785" diameter; middle step tapers to .074" diameter; power step .046" diameter. Length $2\frac{31}{32}$ ".

Metering Rod Jet:

.098" diameter.

Metering Rod Setting:

See Adjustments.

Accelerating Pump:

Diaphragm type, vacuum and mechanically operated. Discharge (pump) jet size No. 68 (.031") drill (Discharges in nozzle passage). Intake ball check (in diaphragm housing) seat size .115-.120" diameter. Discharge ball check (in body) seat size .115-.120" diameter. Vacuum passage restriction (in body) size No. 46 (.081") drill. Vacuum bleed (to throttle bore) size No. 65 (.035") drill.

Pump Stroke:

No Adjustment.

Choke:

Carter Climatic Control: With 160-35 (one piece) choke piston, *set one point lean*; with 160-116s (two piece) choke piston, *set one point rich*. Butterfly type, offset choke valve.

Vacuum Spark Port:

Slot type. Size .125 by .041". Bottom of horizontal port .026" to .036" above top edge of valve in closed position.

ADJUSTMENTS:

Float Adjustment:

With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be $\frac{3}{8}$ " (Gauge T-109-80). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending float lever. Float setting must be checked with bowl cover held at eye height in a level position.

Float Drop:

With bowl cover assembly held in upright position, the distance between float seam (at free end) and bowl cover should be 2". Adjust by bending stop tab on float arm.

Metering Rod Adjustment:

This adjustment is important and should be checked each time the carburetor is reassembled. Insert gauge (Tool T-109-104) in place of metering rod, seating tapered end of gauge in metering rod jet. Hold gauge vertical to insure seating in jet. With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem. With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge. To adjust, bend metering rod arm. Use blending tool T-109-22.

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After adjusting, metering rod arm must contact lifter link at diaphragm shaft and at outer end of lifter link.

Accelerating Pump:

If acceleration is not satisfactory, remove pump housing, intake rivet plug and ball check. Then remove discharge ball check and spring. Examine diaphragm for wear or damage. Be sure intake check and discharge check are not clogged with lint or foreign matter. Intake and discharge ball checks must seat, as a leak at these points will result in poor acceleration. Inspect and replace all worn parts; clean out all passages. *Pump jet is permanently installed, do not remove.*

Fast Idler Adjustment:

With thermostatic coil housing, gasket and baffle plate removed, partial open throttle, close choke valve and then close throttle valve. This will allow the fast idle cam to revolve to fast idle position. With choke valve held tightly closed and slight tension on throttle lever, there should be .030" (Gauge T-109-29) clearance between throttle valve and bore of carburetor (side opposite idle port). Adjust by bending connector link at lower angle.

Unloader Adjustment:

This adjustment must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 1/2" clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (Gauge T-109-83). Adjust by bending choke shaft unloader arm (Use Bending Tool T-109-105).

**"Ambassador" Series (Dual Jetfire)
"YH" Horizontal Climatic Control
(Carter "YH" 973-S Front, 974-S Rear)**

SPECIFICATIONS:

Dimensions:

Flange size, Special 1 1/4" 3 bolt. Primary venturi, 1 1/32" I.D. Secondary venturi, 1 1/16" I.D. Main venturi, 1 5/16" I.D.

Float Level:

Distance from float (at free end) to float chamber cover, with free weight of float on needle and spring to be 7/16".

Vents:

Outside, none. Inside balance vent tube to air horn ahead of choke valve.

Gasoline Intake:

Square vertical, spring loaded, needle. Size No. 46 (.081") (2.06 mm) drill, in needle seat.

Low Speed Jet Tube:

Jet size No. 70 (.028") drill, By-pass in body, size 1.25 mm (.0492") drill. Idle bleed, size No. 58 (.042") drill. Economizer, size No. 54 (.055") drill.

Idle Ports:

Upper port, slot type; length .162". Width, .030".

Idle Port Opening:

Top of port: .124" to .128" (3.15 to 3.25 mm), above top edge of valve with valve tightly closed. Lower port size: .0615" to .0655" (1.56 to 1.66 mm) diameter.

Set Idle Adjustment Screw:

3/4 to 1 3/4 turns open. For richer mixture, turn screw out. Do not idle engine below 550 r.p.m.

Main Nozzle:

In primary venturi, angle 35° off vertical. Discharge jet size: .086" (2.18 mm) inside diameter.

Metering Rod:

Economy step, .0685" (1.74 mm) diameter; power step, .051" (1.3 mm) diameter. Length 2.922" (53.64 mm).

Metering Rod Jet:

.098" (2.49 mm) diameter.

Metering Rod Setting:

See Adjustments.

Accelerating Pump:

Diaphragm type, vacuum and mechanically operated. Discharge (pump) jet size No. 68 (.031") drill (discharges in nozzle passage). Intake ball check (in diaphragm housing) seat size .115-.120" diameter. Discharge ball check (in body) seat size .115-.120" diameter. Vacuum passage restriction (in body) size No. 46 (.081") drill. Vacuum bleed (to throttle bore) size No. 65 (.035") drill.

Pump Stroke:

No Adjustments.

Choke:

Carter Climatic Control, set one point lean. Butterfly type, offset choke valve. Choke heat suction hole, size No. 42 (.0935") (2.37 mm) drill.

Vacuum Spark Port:

Slot type. Size .125 by .041". Bottom of horizontal

CARBURETOR SECTION

port .026 to .036" above top edge of valve in closed position.

ADJUSTMENTS:

Float Adjustment:

With gasket removed, bowl cover assembly inverted, and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be $\frac{7}{16}$ " (Gauge T-109-81). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending float lever. Float setting must be checked with bowl cover held at eye height in a level position.

Float Drop:

With bowl cover assembly held in upright position, the distance between float seam (at free end) and bowl cover should be 2". Adjust by bending stop tab on float arm.

Metering Rod Adjustment:

This adjustment is important and should be checked each time the carburetor is reassembled. Insert gauge T-109-104 in place of metering rod, seating tapered end of gauge in metering rod jet. Hold gauge vertical to insure seating in jet. With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem. With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge. To adjust, bend metering rod arm. Use bending tool T-109-22. After adjusting, metering rod arm must contact lifter link at diaphragm shaft and at outer end of lifter link.

Accelerating Pump:

If acceleration is not satisfactory, remove pump housing, intake rivet plug, and ball check. Then remove discharge ball check and spring. Examine diaphragm for wear or damage. Be sure intake check and discharge check are not clogged with lint or foreign matter. Intake and discharge ball checks must seat, as a leak at these points will result in poor acceleration. Inspect and replace all worn parts; clean all passages. Pump jet is permanently installed, do not remove.

Fast Idle Adjustment:

With thermostatic coil housing, gasket, and baffle plate removed, partial open throttle, close choke valve and then close throttle valve. This will allow the fast idle cam to revolve to fast idle position. With choke valve held tightly closed and slight tension on throttle lever, there should be .030"

(Gauge T-109-29) clearance between throttle valve and bore of carburetor (side opposite idle port). Adjust by bending connector link at lower angle.

Unloader Adjustment:

This adjustment must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be $\frac{1}{2}$ " clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (Gauge T-109-83). Adjust by bending choke shaft unloader arm (Use Bending Tool T-109-105).

On-The Car Adjustment of Carburetors:

After the carburetors are bench calibrated and mounted on the engine, several adjustments must be made to synchronize them.

First, remove the air cleaner boots and "Tee" from carburetor air horns.

Start with the rear carburetor and adjust throttle stop screw until valve is seated in closed position. While doing this, the choke valve must be held in the open position, to insure throttle stop screw contacting low speed stop in the fast idle cam mechanism. Turn throttle stop screws about two turns to crack valves slightly.

Start engine and run to obtain operating temperature.

Attach tachometer to engine and observe R.P.M.

Adjust rear carburetor to maintain minimum of 550 R.P.M.

By means of the connecting throttle linkage between carburetors, adjust front carburetor to synchronize with rear maintaining rear carburetor throttle on idle stop position while checking.

During adjustment, reference must be made to the tachometer because it will indicate when front carburetor throttle is opened beyond rear throttle. The point at which further opening of the front carburetor throttle would cause an increase in R.P.M. is the point of throttle synchronization. At this time, the air inlet noise of each carburetor will be identical.

To make the idle mixture adjustment, replace air cleaner boots and "Tee" connections. Turn rear carburetor mixture adjustment screw in (lean) until engine operation becomes rough, then open $\frac{1}{4}$ turn toward rich. Repeat this on front carburetor.

Another idle speed throttle synchronization adjustment may be required because of improved idle mixture. Adjust idle speed to 550 R.P.M.

**"Statesman" Series
*“WCD” Dual Down Draft Climatic
Control
(Carter WCD-2034-S)**

SPECIFICATIONS:

Dimensions:

Flange size 1" dual, 3 bolt type. Primary venturi, 1 $\frac{1}{32}$ " I.D. Secondary venturi, 2 $\frac{1}{32}$ " I.D. Main venturi, 1 $\frac{1}{16}$ " I.D.

Float Level:

$\frac{5}{32}$ " — See Float Adjustment.

Gasoline Intake:

Size No. 42 (.0935") Drill.

Vent:

Inside, two-balance vent tube in air horn. Outside, none.

Low Speed Jet Tube:

Jet, size No. 68 (.031") drill. By pass, size .0492" diameter. Economizer, size No. 63 (.037") drill. Idle bleed, size .0492" diameter.

Idle Port:

Upper, slot type, length .162"; width, .030".

Idle Port Opening:

.117" to .123" above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw):

Size .0615" to .0655" diameter.

Set Idle Adjustment Screw:

$\frac{1}{2}$ to 1 $\frac{1}{2}$ turns open. For richer mixture, turn screw out. Do not idle engine below 550 r.p.m. For Hydra-Matic, idle engine at 375 r.p.m.

Main Nozzle:

Nozzle is installed permanently. Do not remove.

Metering Rod (Vacuum Type):

Economy step, .066" diameter. Middle step tapers to .058" diameter. Power step .043" diameter.

Metering Rod Jet:

Size .082" diameter.

Metering Rod Setting:

See Adjustments.

Accelerating Pump:

Discharge jet (twin), size No. 74 (.0225") drill. Intake disk check, size No. 30 (.1285") drill. Discharge needle seat, size No. 50 (.052") drill.

Pump Adjustment:

See Adjustments.

Choke:

Carter Climatic Control, set on index. Butterfly type, offset valve. Choke heat suction hole, in bowl cover, size No. 44 (.086") drill.

Vacuum Spark Port:

Round type .039" to .041" diameter. Top of port .033" to .038" above valve with valve tightly closed.

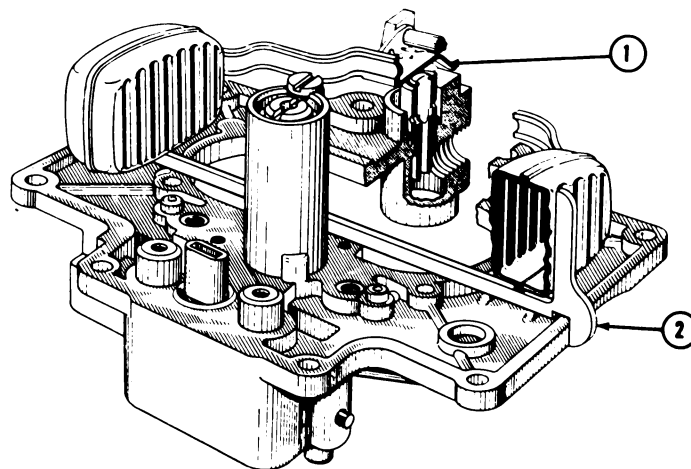
ADJUSTMENTS:

Float Adjustment:

Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed, place float gauge T-109-196 directly under floats with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats (Fig. 1).

VERTICAL ADJUSTMENTS: With float gauge in same position, floats should just clear the horizontal portion of gauge. (Vertical distance between top of float and machined surface of casting must be $\frac{5}{32}$ ".) Adjust by bending float arms. Remove floats, install bowl cover gasket, and then reinstall floats.



1. Float Drop Adjustment Stop Tabs
2. Float Gauge (5/32") T-109-196

**FIGURE 1
FLOAT ADJUSTMENT**

Float Drop Adjustment:

The following adjustment must follow **FLOAT ADJUSTMENT**:

With bowl cover held in upright position, the

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CARBURETOR SECTION

distance between top of free end of floats and bowl cover should be $\frac{5}{8}$ ". Adjust by bending stop tabs on float bracket (Item 1, Fig. 1).

Pump Adjustment:

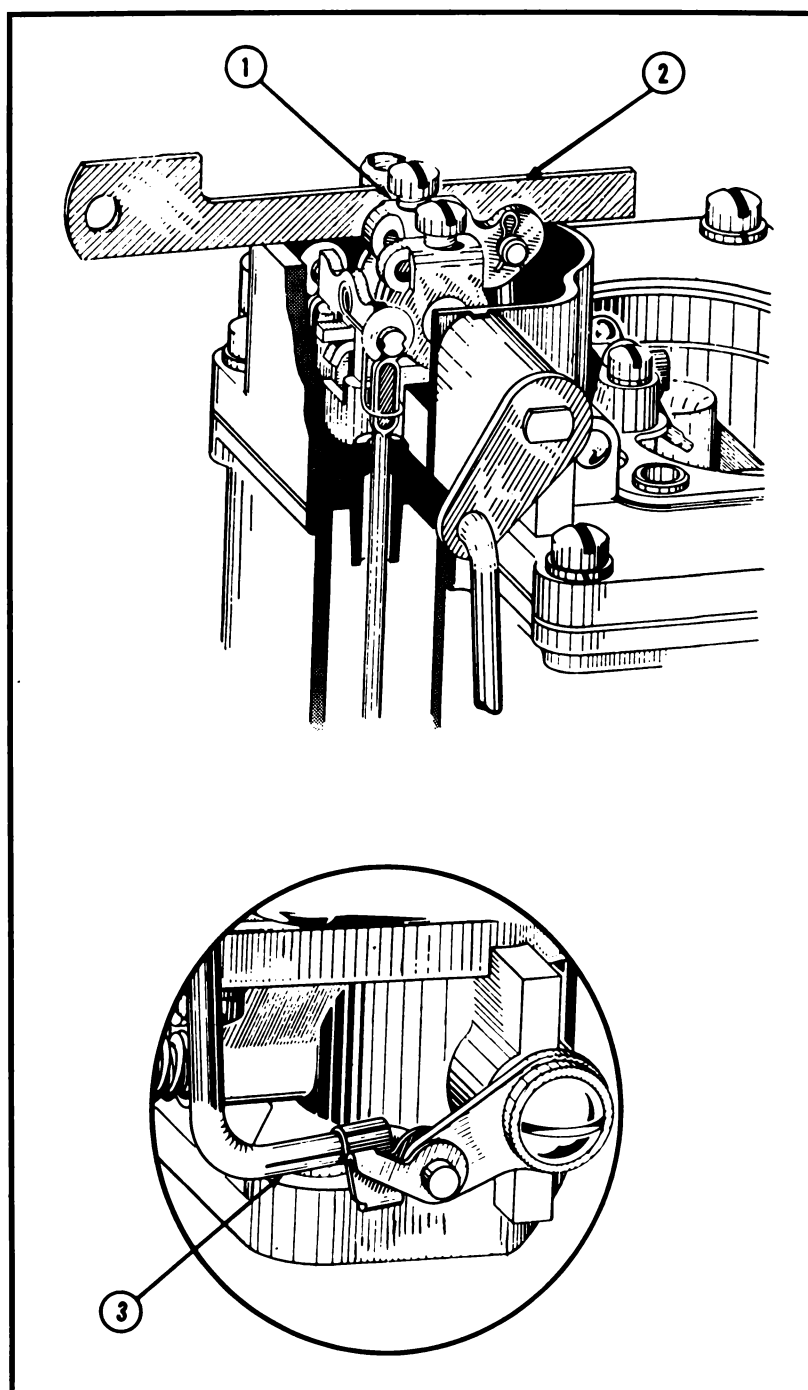
Back out throttle lever set screw until throttle valves seat in bores of carburetor. Be sure fast idle adjusting screw does not hold throttle open. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending pump arm at lower angle. Use Tool T-109-213 (Fig. 2).

Metering Rod Adjustment:

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows:

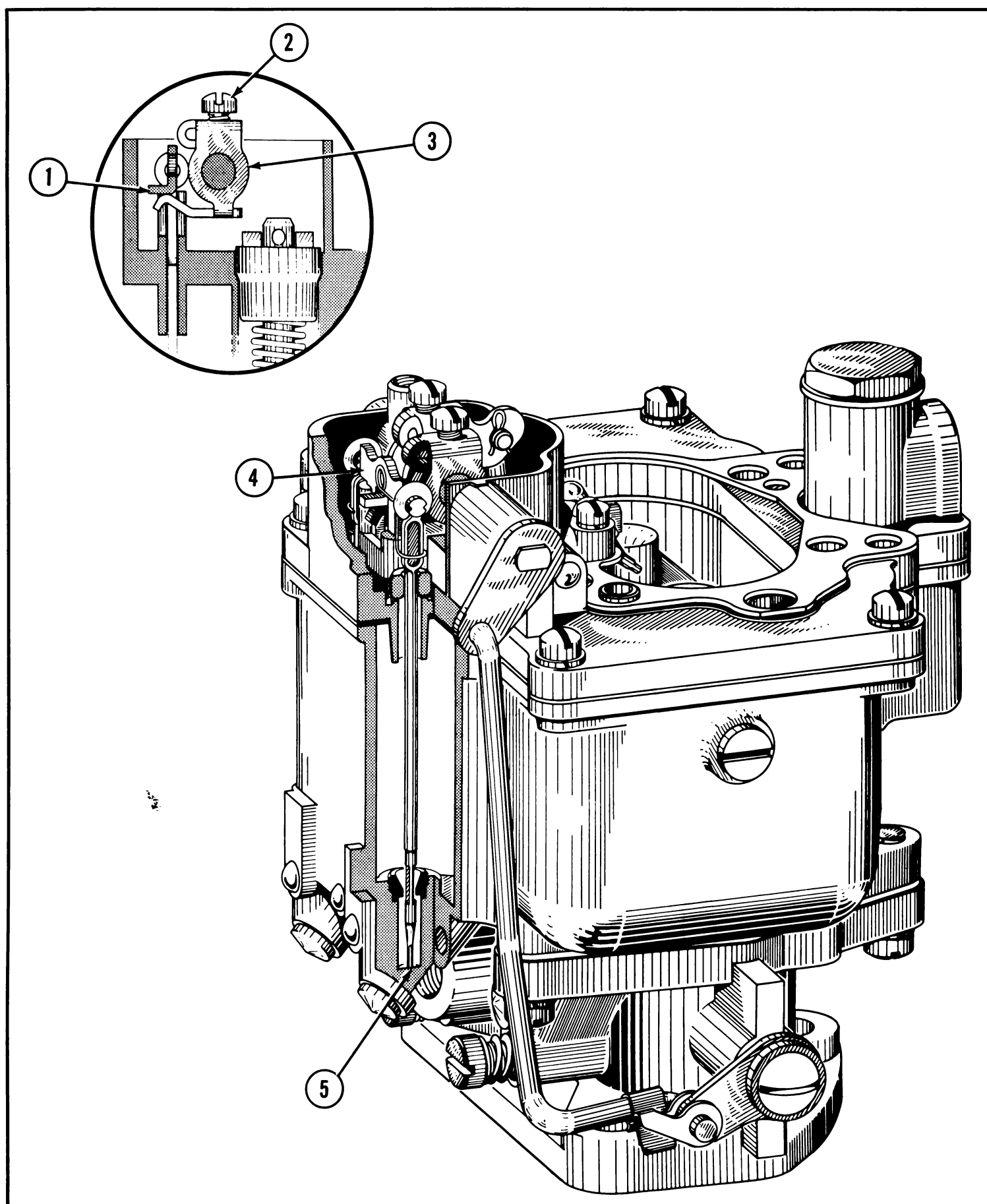
Back out throttle lever set screw to allow throttle valves to seat in bores of carburetor and loosen metering rod arm clamp screw (Item 2, Fig. 3). With metering rods in place, press down on vacuum link (4) until metering rods bottom in carburetor body casting (5).

Holding rods in downward position and throttle



- | | |
|---------------------|-----------------------------|
| 1. Flat on Pump Arm | 3. Bend Here to Adjust Pump |
| 2. Straight Edge | |

FIGURE 2
PUMP STROKE ADJUSTMENT



1. Vacuum Meter Link Lip
2. Metering Rod Arm Clamp Screw
3. Metering Rod Arm
4. Vacuum Meter Link
5. Metering Rod at Bottom in Casting

FIGURE 3
METERING ROD ADJUSTMENT

CARBURETOR SECTION

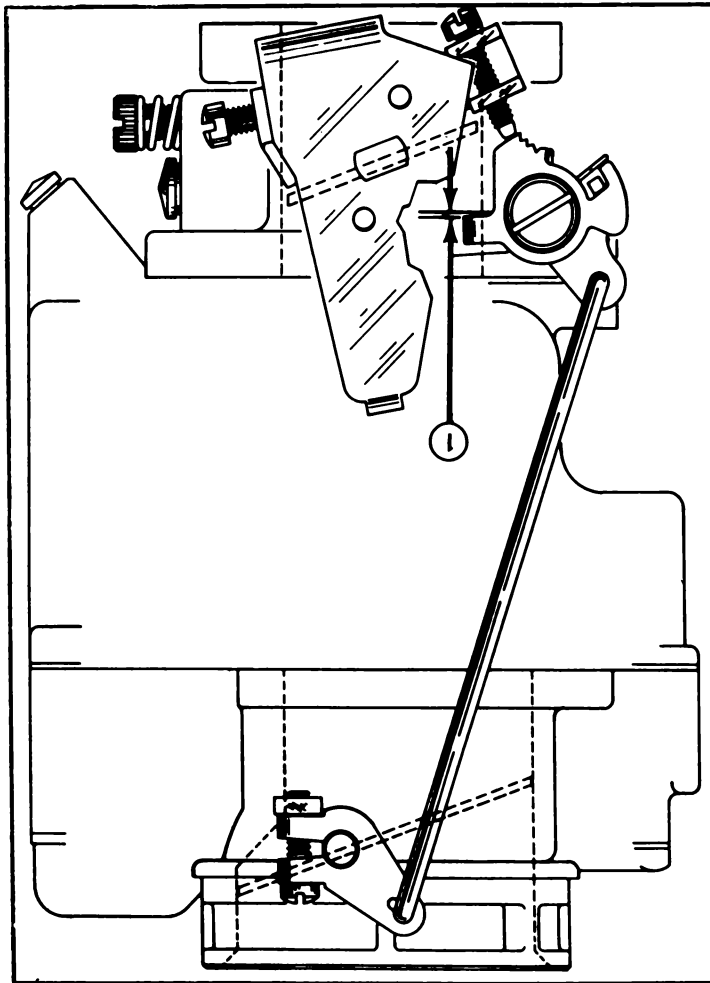
valves seated, revolve metering rod arm (3) until finger on arm contacts lip (1) of vacuum link. Hold in place and carefully tighten clamp screw (2).

Fast Idle Adjustment:

Loosen choke lever clamp screw on choke shaft (Fig. 4). Insert .005" feeler gauge T-109-237 between lip of fast idle cam and boss of flange

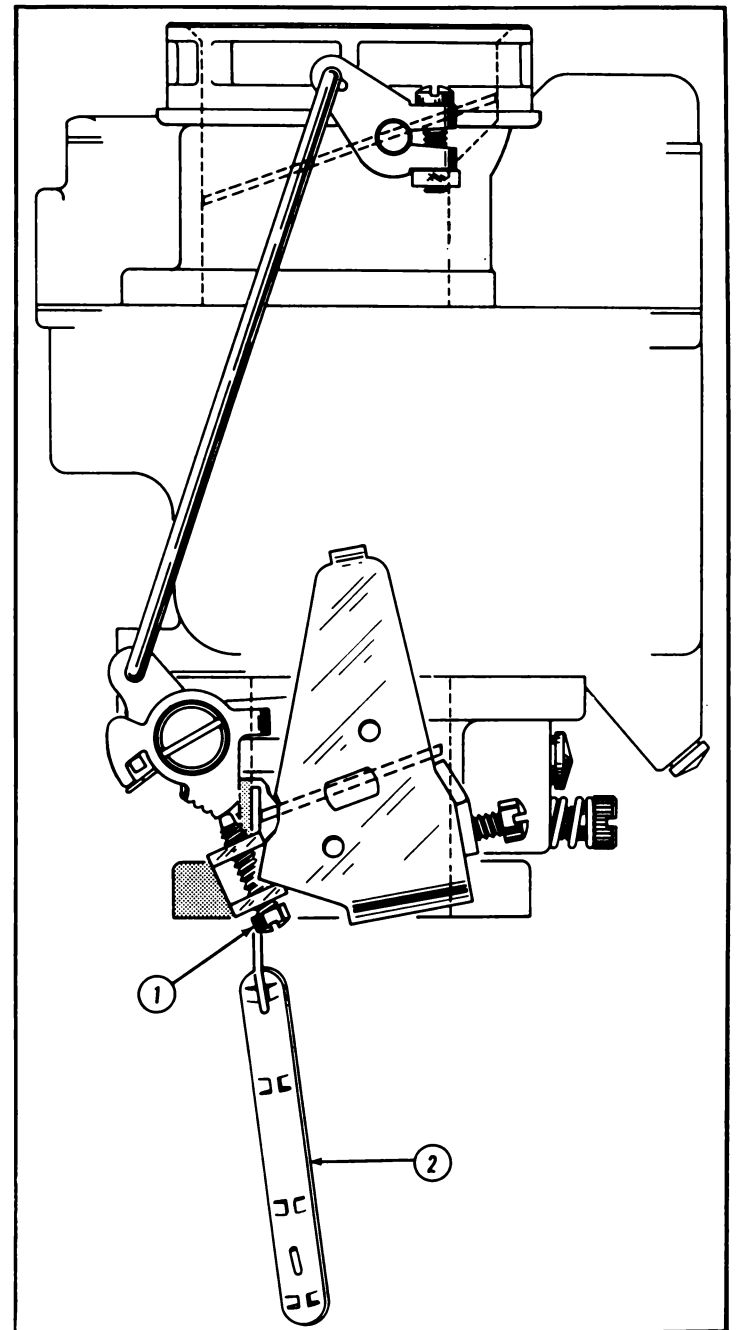
casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw.

With choke valve tightly closed, tighten fast idle adjusting screw until there is .026" opening between throttle valve and bore of carburetor (side opposite idle port) (Fig. 5). Use gauge T-109-189. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.



1. Gauge T-109-237 (.005")

FIGURE 4
FAST IDLE ADJUSTMENT

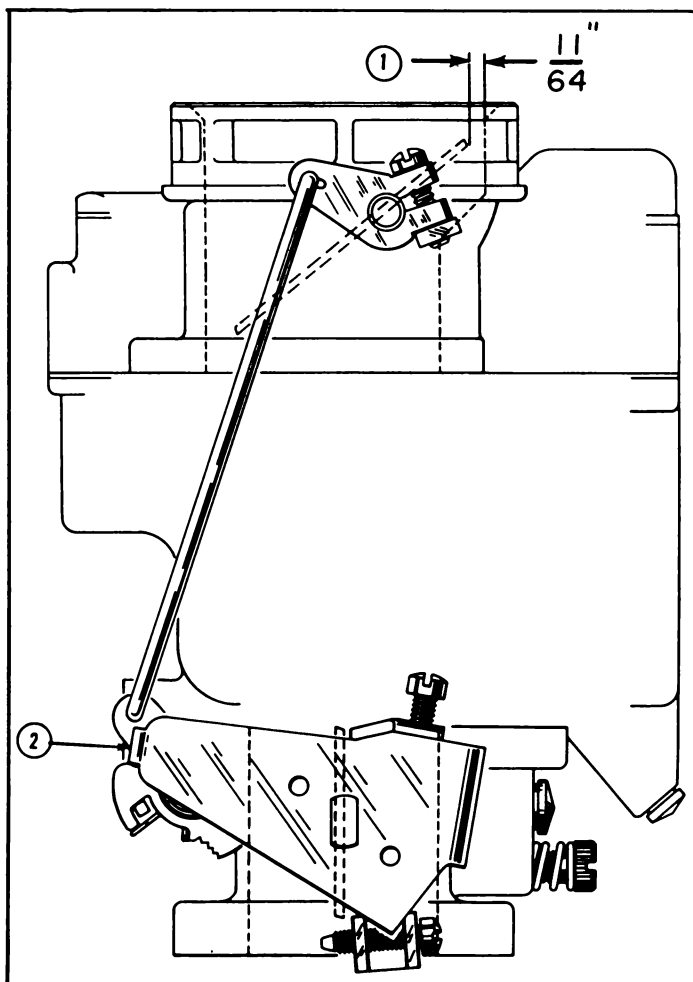


1. Fast Idle Adjusting Screw
2. Gauge T-109-189

FIGURE 5
FAST IDLE ADJUSTMENT

Unloader Adjustment:

With throttle wide open, there should be $\frac{11}{64}$ " Gauge (T-109-166) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (T-109-41) (Fig. 6).



1. $\frac{11}{64}$ " Gauge T-109-166
2. Bend Lip to Adjust T-109-41

FIGURE 6
UNLOADER ADJUSTMENT

**"Rambler" Series
"YF" Down Draft Climatic Control
(Carter YF-2014-S)**

SPECIFICATIONS:**Dimensions:**

Flange size, $1\frac{1}{4}$ " S.A.E. Primary venturi, $1\frac{1}{32}$ " (8.73 mm) I.D. Secondary venturi, $1\frac{1}{16}$ " (17.46 mm) I.D. Main venturi, $1\frac{1}{4}$ " (31.75 mm) I.D.

Float Setting:

$\frac{1}{2}$ "—See Float Adjustment.

Vents:

Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake:

Square vertical spring loaded needle. Size No. 46 (2.06 mm) drill, in needle seat.

Low Speed Jet Tube:

Jet size, No. 70 (.71 mm) drill. By-pass in air horn, size No. 55 (1.32 mm) drill. Bleed in body, size No. 52 (1.61 mm) drill. Economizer in body, size No. 53 (1.51 mm) drill.

Idle Port:

Upper port, slot type: length .200" (5.08 mm). Width, .030" (.76 mm).

Idle Port Opening:

Top of port: .142" to .146" (3.61 to 3.71 mm) above top edge of valve with valve tightly closed. Lower port size: .0615" to .0655" (1.56 to 1.66 mm) diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw:

$\frac{1}{2}$ to $1\frac{1}{2}$ turns open. For richer mixture, turn screw out. Do not idle engine below 550 r.p.m. For Hydra-Matic, idle engine at 375 r.p.m.

Main Nozzle:

Nozzle is installed permanently. *Do not remove.* Anti-percolator air bleed: size .028" (.71 mm) diameter.

Metering Rod (Diaphragm Type):

Economy step, .078" (1.98 mm) diameter; middle step tapers to .07325" (1.86 mm) diameter; power step, .047" (1.19 mm) diameter.

Metering Rod Jet:

.10236" (2.6 mm) diameter.

Metering Rod Setting:

See Adjustments.

Accelerating Pump:

Diaphragm type, vacuum operated. Discharge through nozzle. Intake (ball check) size No. 40 (2.49 mm) drill. Vacuum restriction (in flange) size No. 55 (1.32 mm) drill. Vacuum passage (diaphragm bleed) size No. 65 (.89 mm) drill. Discharge (ball check) seat size No. 32 (2.95 mm) drill in diaphragm housing. Discharge restriction (in housing) No. 65 (.89 mm) drill.

Pump Adjustment:

None.

Choke:

Carter Climatic Control, set one point lean. Valve; Offset, butterfly type. Choke heat suction

CARBURETOR SECTION

hole; restriction in body size No. 46 (2.06 mm) drill.

Vacuum Spark Port:

Round type. Size .040" (1.02 mm) diameter. Bottom of port .021-.029" (.53 to .74 mm) above top edge of valve in closed position.

ADJUSTMENTS:

Float Adjustment:

With gasket removed, bowl cover assembly inverted, and float resting on seated needle, the distance from the bowl cover to the top of float should be $\frac{1}{2}$ " (Gauge T-109-83). Adjust by bending lip of float, not float arm.

Metering Rod Adjustment:

This adjustment is important and should be checked each time the carburetor is reassembled or lean rods are installed. With throttle valve seated in bore of carburetor, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber. (Tool T-109-212 may be used to hold diaphragm shaft down while adjusting metering rod.)

Metering rod should contact bottom of metering rod well, and metering rod arm should contact lifter link between springs and at supporting lug. Adjust by bending lip up or down.

Accelerating Pump:

If acceleration is not satisfactory, remove pump housing, intake check assembly, discharge check ball and spring. Examine diaphragm for wear or damage. Be sure intake screen, intake check, and discharge check are not clogged with lint or foreign matter. Discharge check ball must seat, as a leak at this point will result in poor acceleration. Inspect, clean, and replace all worn parts.

Fast Idle Adjustment:

Remove thermostatic coil housing, gasket and baffle plate. Crack throttle valve, and hold choke valve fully closed, then close throttle. This will allow fast idle cam to revolve to fast idle position. With choke valve held tightly closed and slight tension on throttle lever, there should now be .054" clearance (Gauge T-109-193) between throttle valve and bore of carburetor (side opposite idle port). Adjust by bending connector link at lower angle. Use bending tool T-109-41.

Unloader Adjustment:

This adjustment must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be $\frac{3}{32}$ " clearance between lower edge of choke valve and inner wall of air horn (Gauge T-109-126). Adjust by bending arm of choke trip lever (Use tool T-109-187).

TRANSMISSION AND OVERDRIVE SECTION

“Ambassador” Series Dual Jetfire Overdrive Controls

The overdrive relay is designed to provide a push button overtake or kickdown action to third speed.

The schematic drawings illustrated in Figures 1 and 2 outline the overdrive circuits in operation.

OVERDRIVE CONTROLS IN OPERATION

The electrical supply for the governor circuit is controlled by the ignition switch and shift switch. The ignition switch, when turned on, permits electrical pressure (voltage) to be present through the 20 ampere circuit breaker to which is attached a wire from the #2 terminal on the overdrive relay (Fig. 2).

The electrical pressure is present through the overdrive relay coil “A” (Fig. 1) and down to the shift switch. When the dash overdrive control is pushed in for overdrive operation, the shift switch is closed. This permits electrical voltage to be present to the overdrive governor insulated point. When car speed is increased to governor cut-in speed 29-30 M.P.H., the governor contacts close completing the governor circuit to ground and an electrical current flows through this circuit. The current flow through relay coil “A” makes it become an electromagnet pulling armature “B” downward. At this moment, contacts “C” are closed and contacts “D” are opened. Voltage at points “C” from the generator voltage regulator battery terminal through the 30 ampere fuse, and terminal “B” of the overdrive relay, causes current flow from terminal “NO” of the overdrive relay to terminal #4 on the overdrive solenoid energizing the solenoid actuating and holding coils. This electromagnetically places the solenoid pawl on the step of the overdrive sun gear balk ring and opens the actuating coil points. Now the holding coil, with a low amperage requirement only, holds the solenoid pawl on the balk ring. A release of the throttle provides the needed reversal of torque in the drive line to slip the solenoid pawl from the step on the balk ring into a window of the sun gear hub to obtain overdrive operation. As the solenoid pawl moves into a window of the sun gear hub, the ignition interrupter points are closed connecting to ground.

The closing of points “C” in overdrive relay also provides voltage to the overdrive light relay terminal “S” (Fig. 1) from overdrive relay terminal “NO” and also to one side of the overdrive indicator light. The other side of the light is connected to terminal “H” on the light relay. Current flows through the light relay coil from terminal “S” on the relay to ground. This closes the light relay points and current flows through the points from terminal “H” to terminal “B” and also to terminal “NC” on overdrive relay. From terminal “NC,” the current flows to ground through the solenoid ignition interrupter points. This causes the completion of the indicator circuit so the light is on.

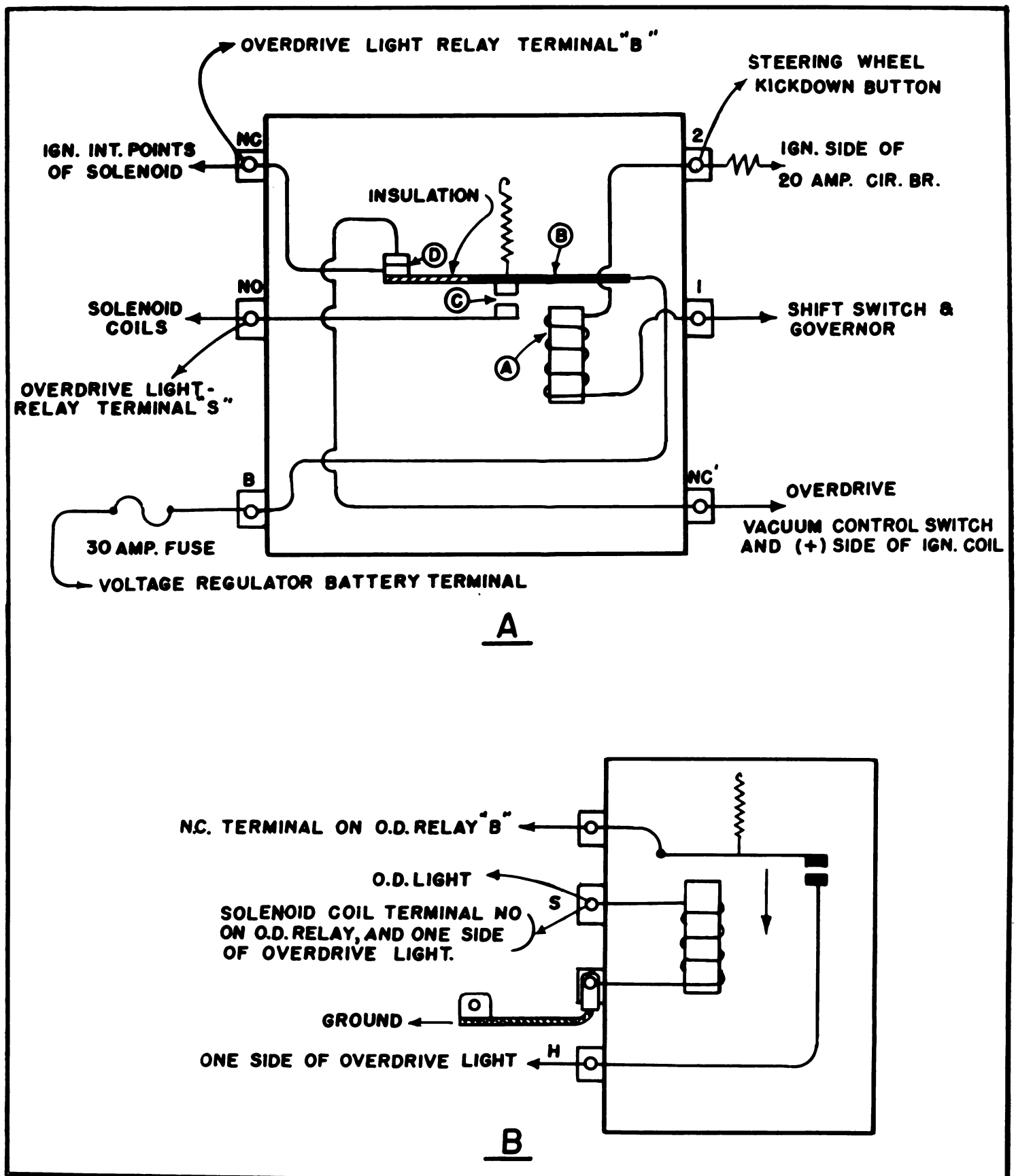
Decreasing car speed to approximately 25 M.P.H. will result in the opening of the overdrive governor points opening the governor circuit. This will demagnetize the overdrive relay coil and points “C” will be opened. As soon as points “C” open, the current supply to the overdrive solenoid coil and indicator light is cut off and the solenoid return spring pulls the solenoid pawl out of the sun gear hub because on deceleration no side load is present on the pawl. The car will now free-wheel and with throttle applied will pull in third speed operation.

To obtain third speed overtake operation while in overdrive, the button on the steering wheel is depressed. In doing so, the voltage present at terminal 2 of the overdrive relay is shunted to ground through the push button ground contact. A short circuit in the supply voltage is prevented by the use of the 5 ohm resistance element in series with the battery circuit. This immediately de-energizes the overdrive relay coil opening points “C” and closing points “D.” Opening points “C” de-energizes the solenoid and overdrive light relay. The light then goes out and tension of the solenoid return spring tends to pull the pawl out of the sun gear hub. The side thrust holds the pawl in. It is necessary to reverse the drive line torque for a moment. This is done by the interruption of the ignition system for approximately two revolutions of the engine.

Remember:

When points “C” of overdrive relay opened, points “D” closed. With points “D” closed, the ignition primary circuit on the distributor

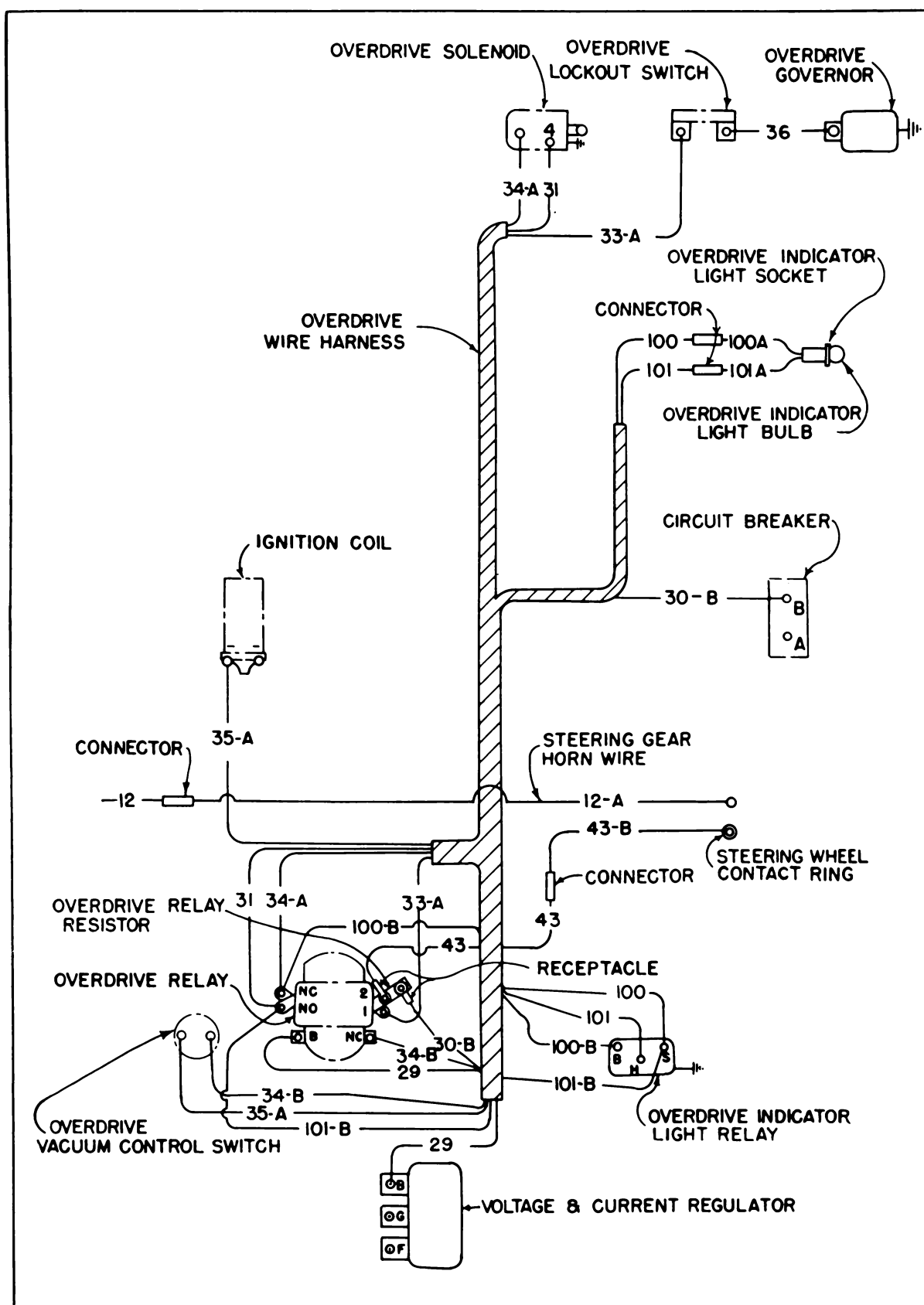
TRANSMISSION AND OVERDRIVE SECTION



A—Overdrive Relay Circuit
B—Overdrive Light Relay Circuit

FIGURE 1
Overdrive Relay and Overdrive Light Relay Circuits

NASH TECHNICAL SERVICE MANUAL

**Circuit
Number****Route of Wire**

- 29 Overdrive Relay to Voltage Regulator
 30-B Overdrive Relay to Circuit Breaker
 31 Overdrive Relay to Overdrive Solenoid
 33-A Overdrive Relay to Overdrive Lockout Switch
 34-A Overdrive Relay to Overdrive Solenoid
 34-B Overdrive Relay to Vacuum Switch
 35-A Overdrive Vacuum Switch to Ignition Coil
 36 Overdrive Governor to Lockout Switch
 43 Overdrive Relay to Kickdown Button Wire Con-
 nection

**Circuit
Number****Route of Wire**

- 43-B Kickdown Button Wire Connection to Kickdown
 Button
 100 Indicator Light Relay to Indicator Light
 Connection
 100-A Indicator Light to Overdrive Harness Connection
 100-B Overdrive Relay to Indicator Light Relay
 101 Indicator Light Relay to Indicator Light
 Connection
 101-A Indicator Light to Overdrive Harness Connection
 101-B Overdrive Relay to Indicator Light Relay

FIGURE 2
OVERDRIVE WIRING DIAGRAM

TRANSMISSION AND OVERDRIVE SECTION

side of the coil is grounded by the circuit completed through the vacuum switch, points "D" and the ignition interrupter points of the solenoid. As soon as the solenoid releases, the interrupter points within it are opened and the engine again fires normally. The drive through the overdrive is then direct and third speed operation is obtained.

The purpose of the vacuum switch in the overdrive ignition interrupter circuit is to prevent an interruption of the ignition system during a time of deceleration.

The vacuum is high in the intake manifold on deceleration so the vacuum switch opens the ignition interrupter circuit preventing ignition interruption.

HYDRA-MATIC TRANSMISSION SECTION

Dual Range Hydra-Matic offered for 1953 is basically the same design as the 1952 unit with refinements added to improve shift characteristics and simplify service procedures. The specific changes are discussed in the following paragraphs:

Case

The line exhaust valve has been removed from the case and added to the front servo assembly for 1953. In its new location, service is simplified by eliminating the need for a valve sleeve and the

use of a special tool. Easier accessibility has also been accomplished by this change.

One-two shift oil now closes the rear servo exhaust valve. The case passages have been changed to accommodate this.

Front Servo

Front Servo Valve Body Added

A valve body which contains the line exhaust and over-run control valves has been added to the front servo assembly. In the 1952 transmission, the line exhaust valve was located in the case and

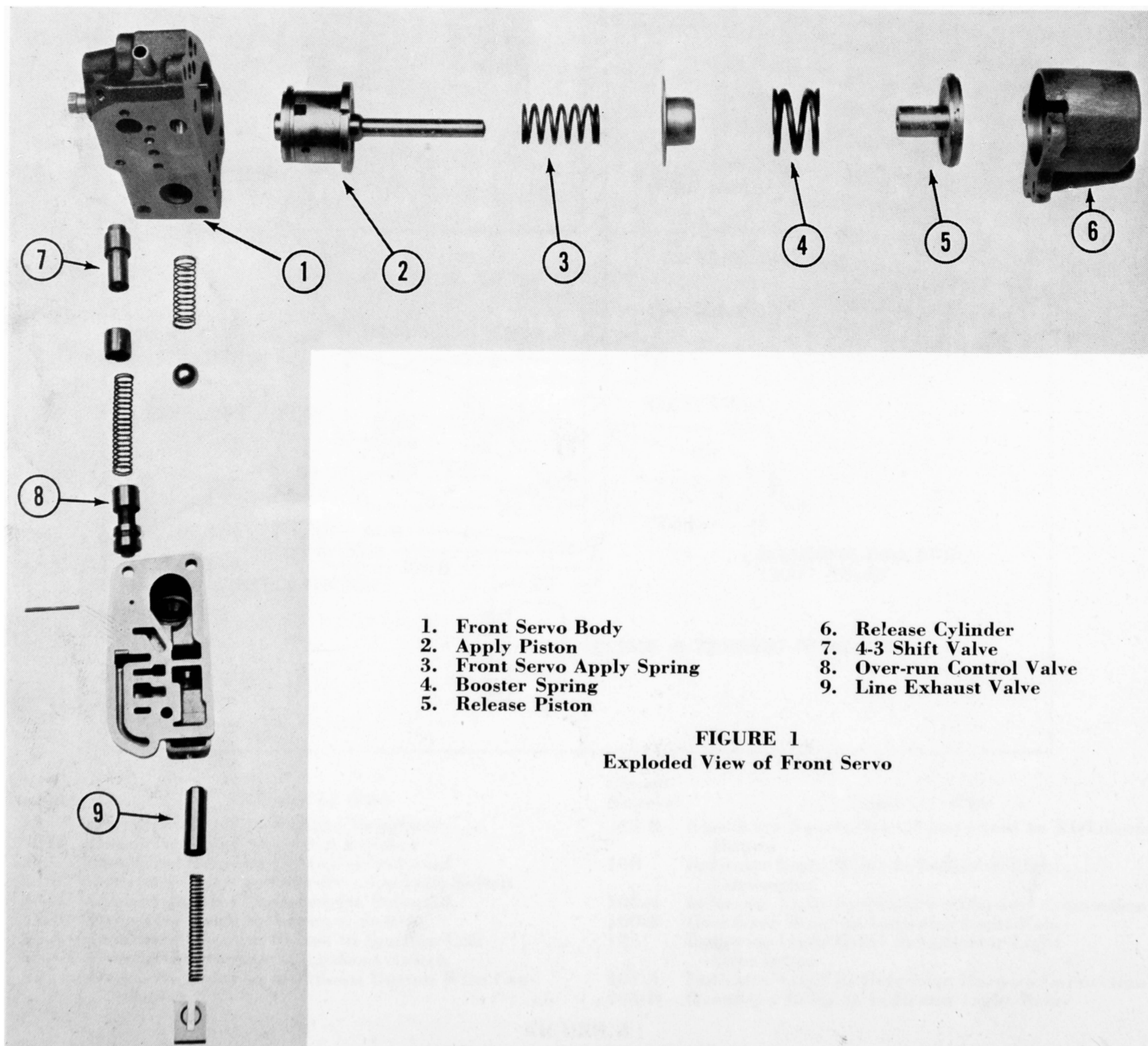


FIGURE 1
Exploded View of Front Servo

HYDRA-MATIC TRANSMISSION SECTION

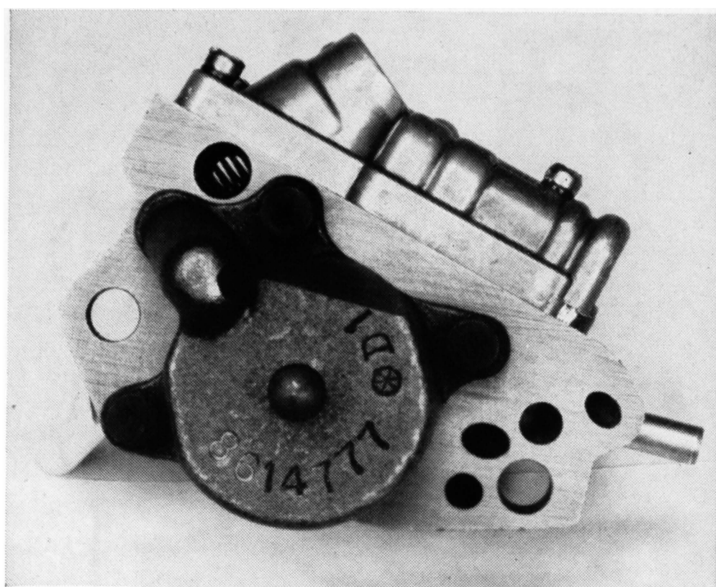


FIGURE 2
Front Servo Assembly

the over-run control valve in the front servo body. The new location for these valves simplifies service by combining them into an easily accessible valve body (Fig. 1).

Number of Release Cylinder Bolts

On past models, only two bolts held the release cylinder to the servo body. Three bolts are used in 1953. This improves sealing and eliminates the need for a gasket (Fig. 2).

Piston Arrangement Changed

The 1952 front servo piston assembly included the apply piston, and the combination release and compensator piston. The 1953 front servo piston assembly includes only the apply piston and compensator piston with the release piston a separate part as shown in Figure 1. A booster spring has been added which acts on the release piston. This improves band release and clutch apply action.

Four-Three Downshift Valve Changed

The orifice in the 4-3 downshift valve has been eliminated. This orifice is now located in a passage by-passing the valve. Also eliminated are the slot in the end of the valve and its retainer as shown in Figure 1.

Rear Servo

The operation and design of the quick dump valve in the rear servo has been changed. In 1952, spring pressure held the valve closed and L oil opened it, whereas this year, 1-2 oil keeps the valve closed and spring pressure opens it. These changes provide smoother D to L and quicker Neutral to D shifts (Fig. 3).

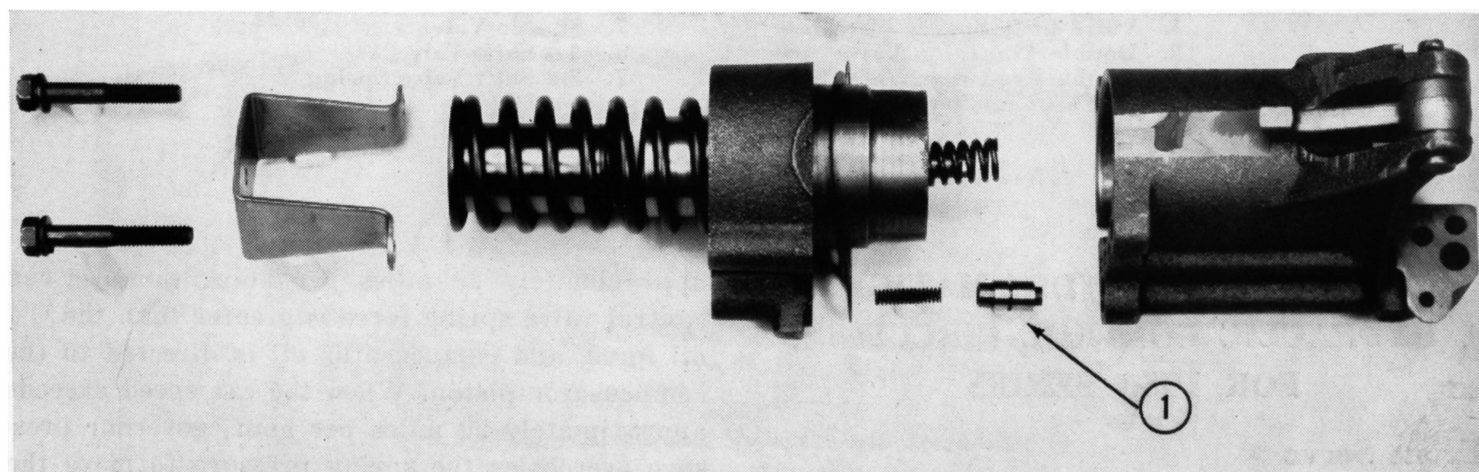
Valve Body

The 3-4 shift valve assembly in 1952, which consisted of a shift valve, a lockout valve assembly, and an auxiliary shift spring, has been eliminated. It has been replaced by a new 3-4 shift valve. Because of this change, it was necessary to add a 4-3 shuttle valve which either allows detent or D-3 oil to close the 3-4 shift valve.

A double transition valve spring and compensator auxiliary plug have been added to improve shift characteristics. A by-pass valve has also been added. It is a leaf type check valve with an orifice. This check valve replaces the orifice machined in the control valve assembly which functioned with the 3-2 timing valve (Figs. 4 and 5).

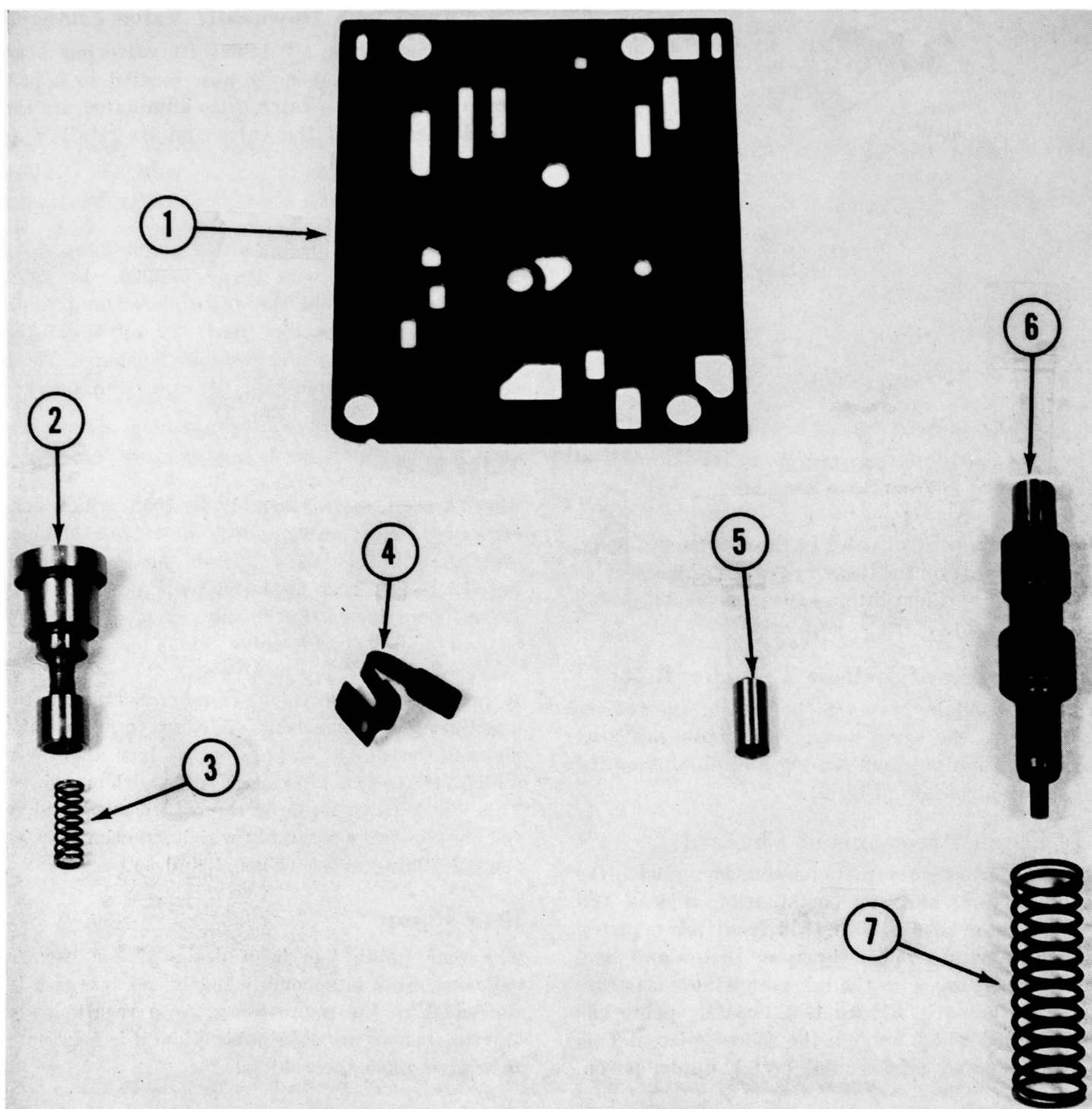
Rear Pump

The rear pump has been designed for greater capacity. This is accomplished by an increase in the width of the pump gears. As a result, lower starting speeds are obtainable when it is necessary to tow or push the vehicle.



1. Rear Servo Exhaust Valve

FIGURE 3
Rear Servo Assembly



- | | |
|-----------------------------------|---------------------------|
| 1. Valve Body Spacer Plate | 5. Shuttle Valve |
| 2. Double Transition Valve | 6. 3-4 Shift Valve |
| 3. Double Transition Valve Spring | 7. 3-4 Shift Valve Spring |
| 4. By-Pass Clutch Valve | |

FIGURE 4
New Component Parts in Valve Control Assembly

CHANGES OF HYDRA-MATIC HYDRAULIC CONTROL CIRCUITS FOR 1953 SERIES

Front Servo

The operation of the over-run control valve has been changed on the 1953 transmission to improve shift timing. With the car speed below

approximately 20 miles per hour, the over-run control valve spring force is greater than the G-1 oil force, and compensator oil is directed to the compensator piston. When the car speed exceeds approximately 20 miles per hour, governor pressure overcomes the spring pressure to move the over control valve, cutting off compensator oil and directing front band apply oil to the compensator piston. Thus at highway speeds over 20

HYDRA-MATIC TRANSMISSION SECTION

miles per hour where over-run engine braking may be desired, two servo apply areas are supplied with line pressure to prevent band slippage. Below 20 miles per hour, line pressure is directed only to the apply piston with the pressure to the compensator piston varied to suit the engine output. This is illustrated in Figures 6 and 7.

As soon as the front unit shifts to direct drive, front band release oil assists the over-run control valve spring to overcome G-1 pressure. Therefore, whenever the front unit is in direct drive regardless of car speed, only compensator oil is allowed to the compensator piston (Fig. 8).

The orifice has been eliminated in the 4-3 downshift valve in the 1953 servo. Below 25 miles per hour, the 4-3 valve is held open by front band apply oil (Fig. 6). At speeds greater than 25 miles per hour, G-1 pressure operating on a larger area moves the 4-3 downshift valve into the passage blocking off front servo apply oil (Fig. 7).

The apply oil is forced to go through the passage with a restricted orifice, thus slowing the front servo apply at speeds above 25 miles per hour to

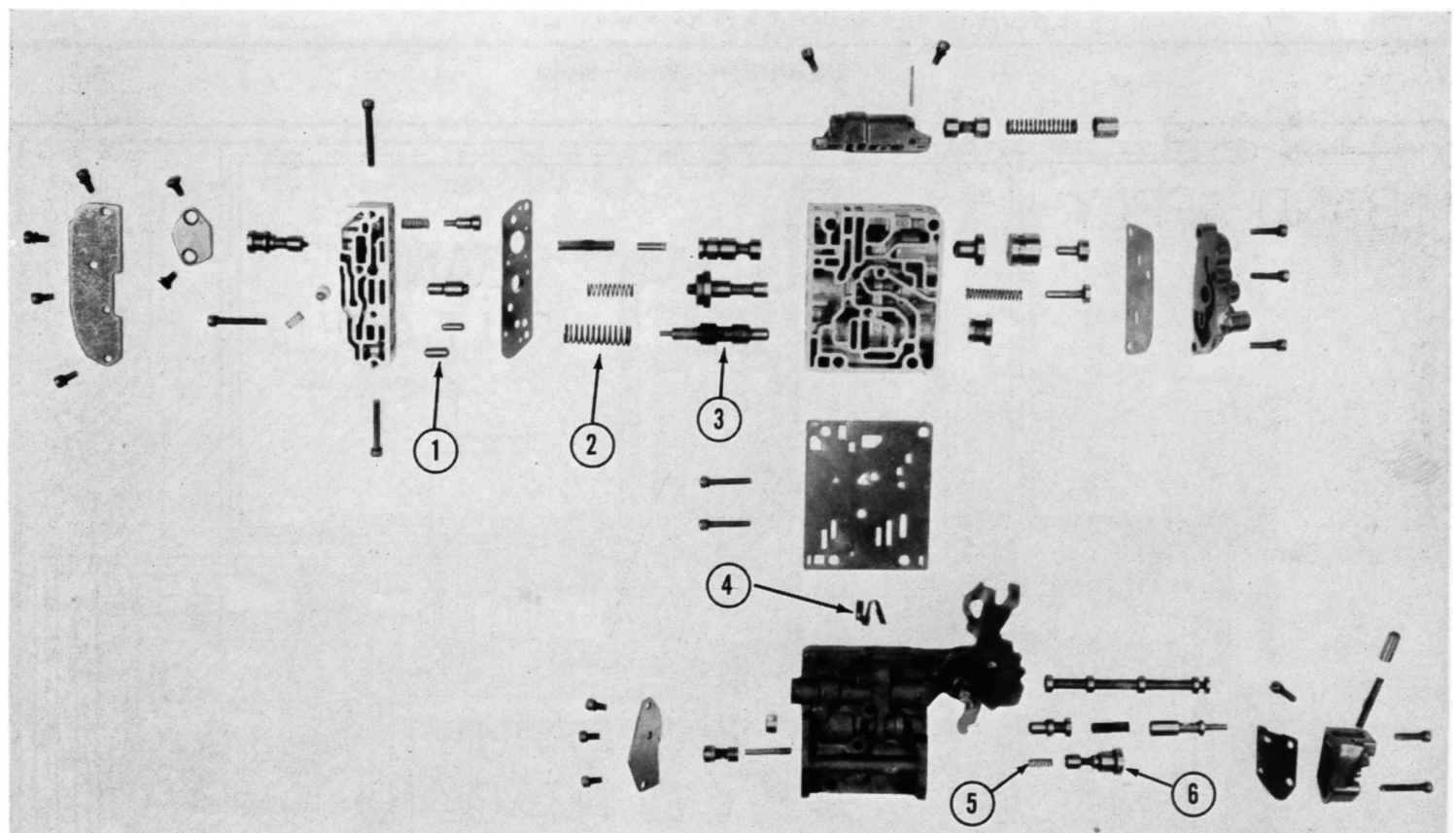
give the engine time to speed up for a smooth forced 4-3 downshift.

Shuttle Valve Action

The addition of a shuttle valve in the 1953 control valve assembly has eliminated the need for a 3-4 lockout valve assembly and a 3-4 auxiliary spring. The shuttle valve permits the use of the same area for detent oil, drive 3 oil, and the regulated TV oil. With the manual valve in drive 3 position, drive 3 oil moves the shuttle valve away from the inner valve body, blocking the detent oil passage, and allowing drive 3 oil to close the 3-4 shift valve (Fig. 9).

With the manual valve in drive 4 and the accelerator pedal completely depressed for a forced downshift, detent oil positions the shuttle valve toward the inner valve body blocking drive 3 oil passage and allowing detent oil to pass through to the 3-4 shift valve (Fig. 10).

Regulated TV action is not affected by the shuttle valve as long as detent oil and drive 3 oil are not present (Fig. 11).



1. Shuttle Valve
2. 3-4 Shift Valve Spring
3. 3-4 Shift Valve

4. By-Pass Check Valve
5. Double Transition Valve Spring
6. Double Transition Valve

FIGURE 5
Exploded View of Valve Control Assembly

NASH TECHNICAL SERVICE MANUAL

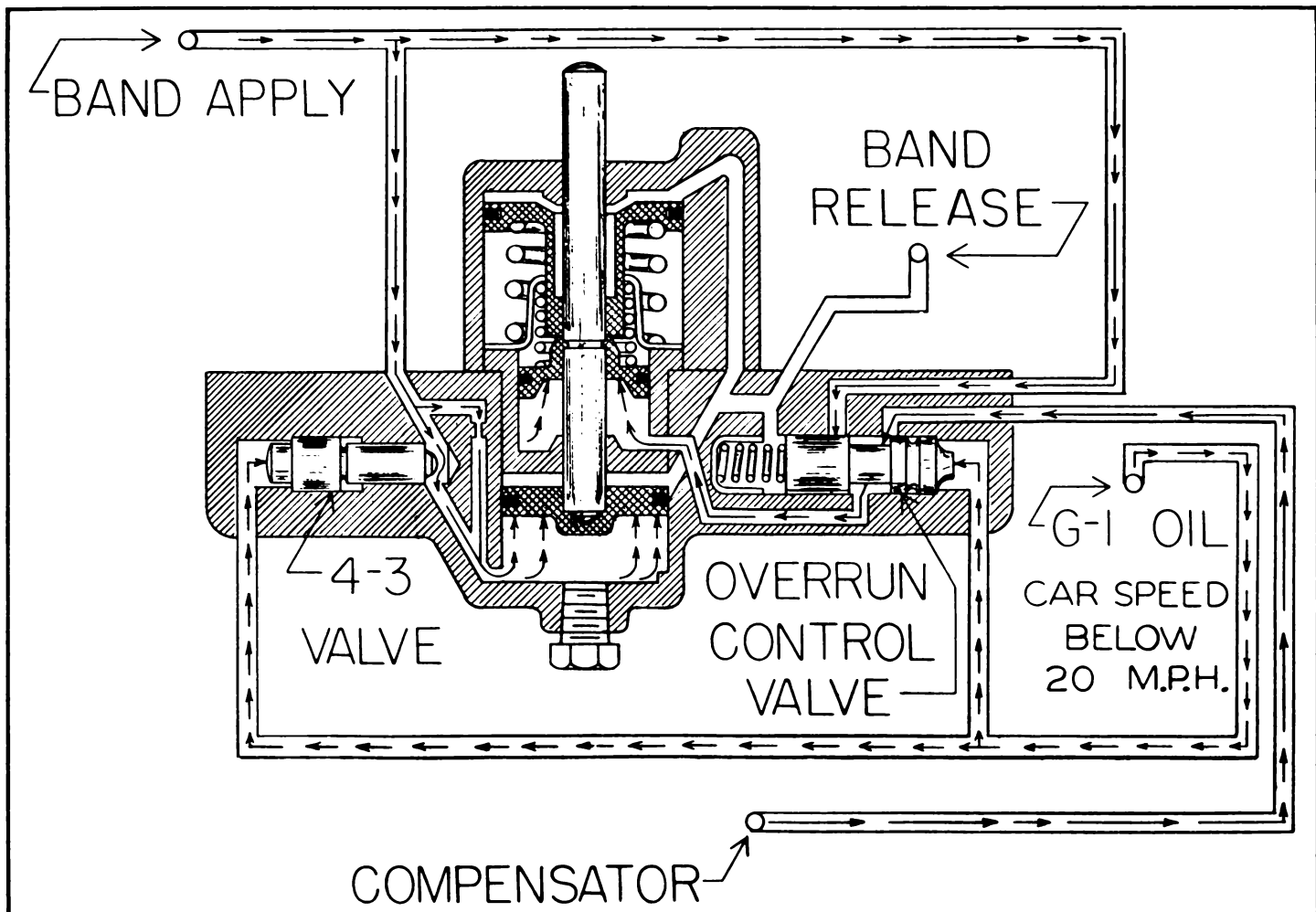


FIGURE 6—Front Servo

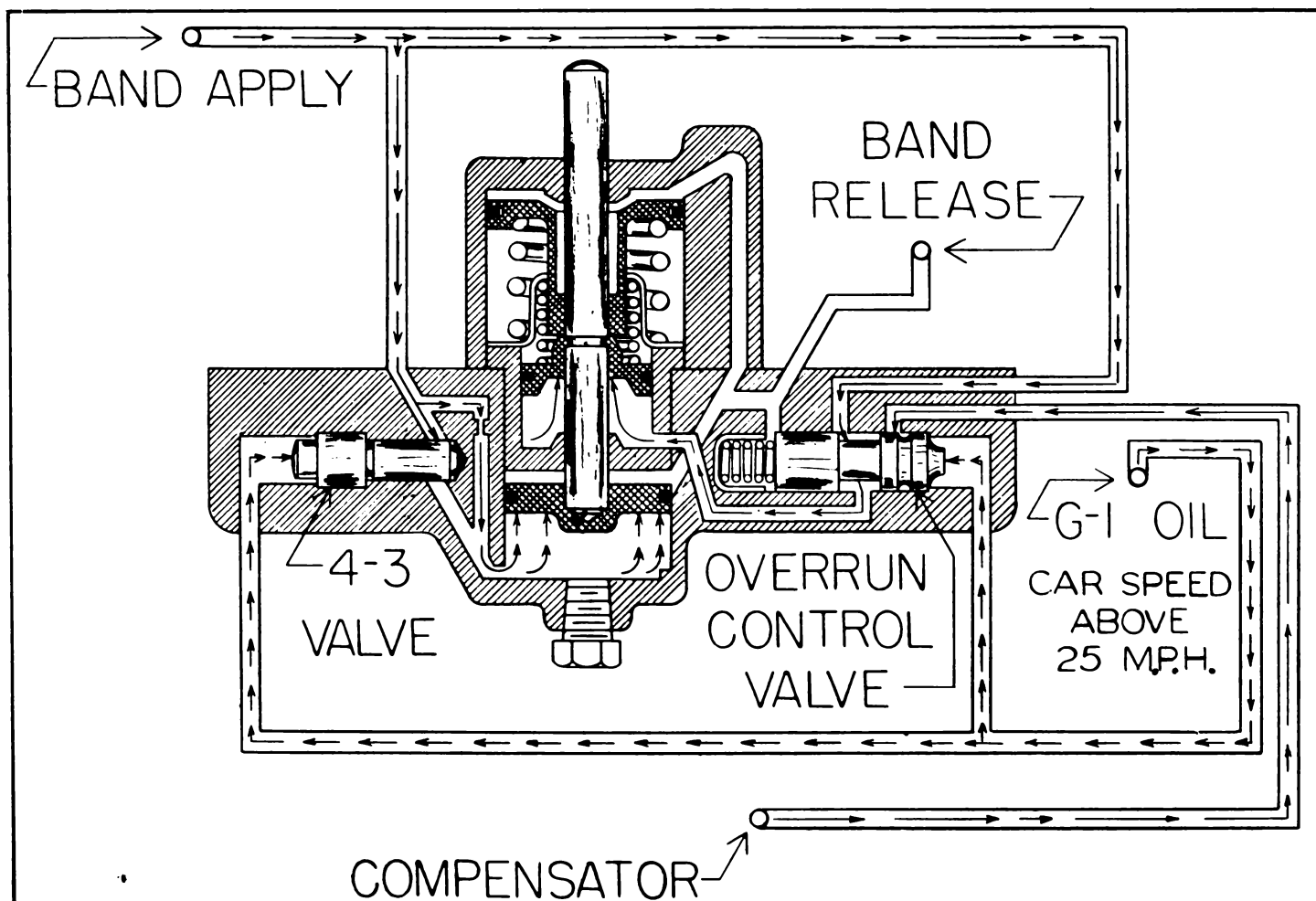


FIGURE 7—Front Servo

HYDRA-MATIC TRANSMISSION SECTION

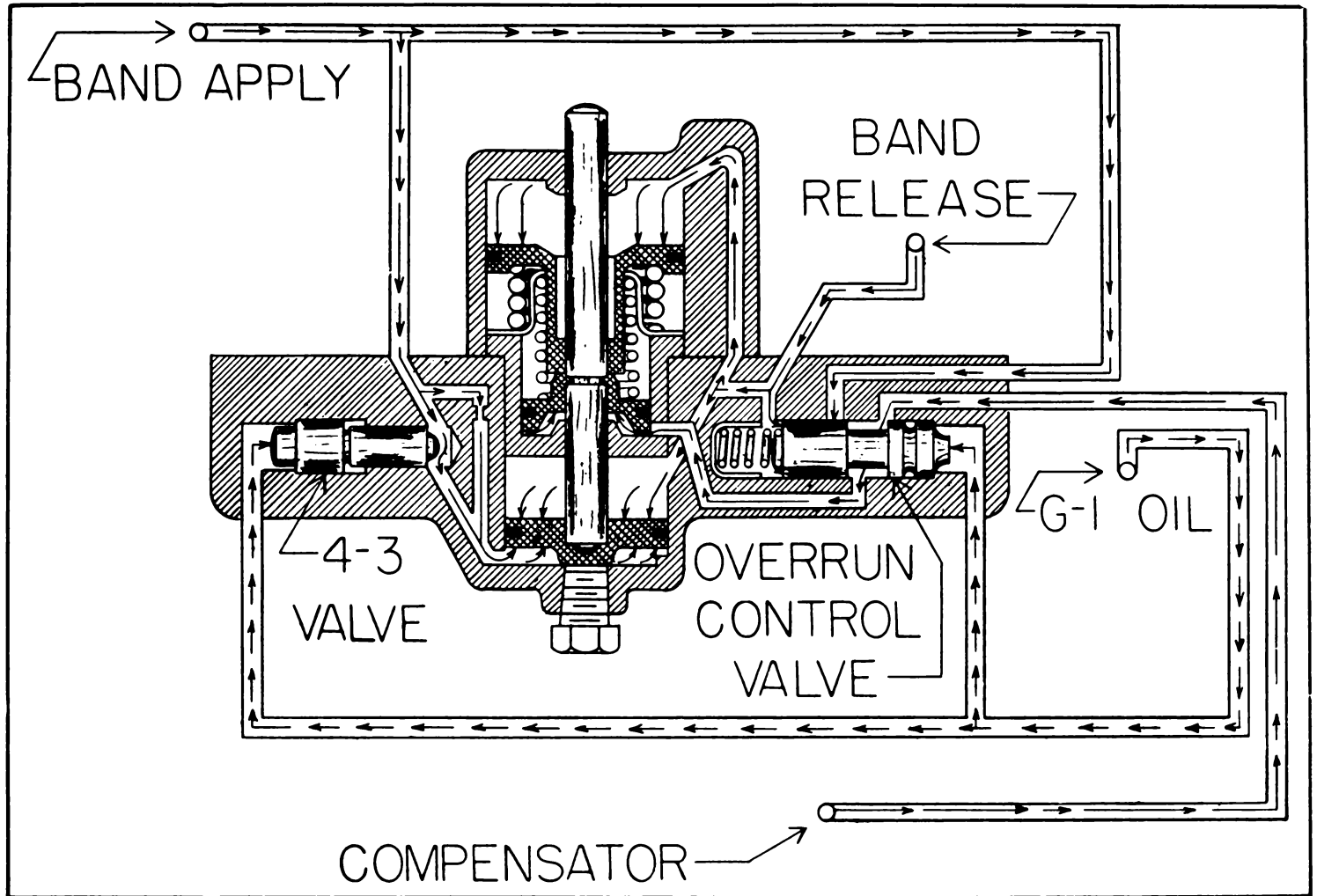


FIGURE 8—Front Servo

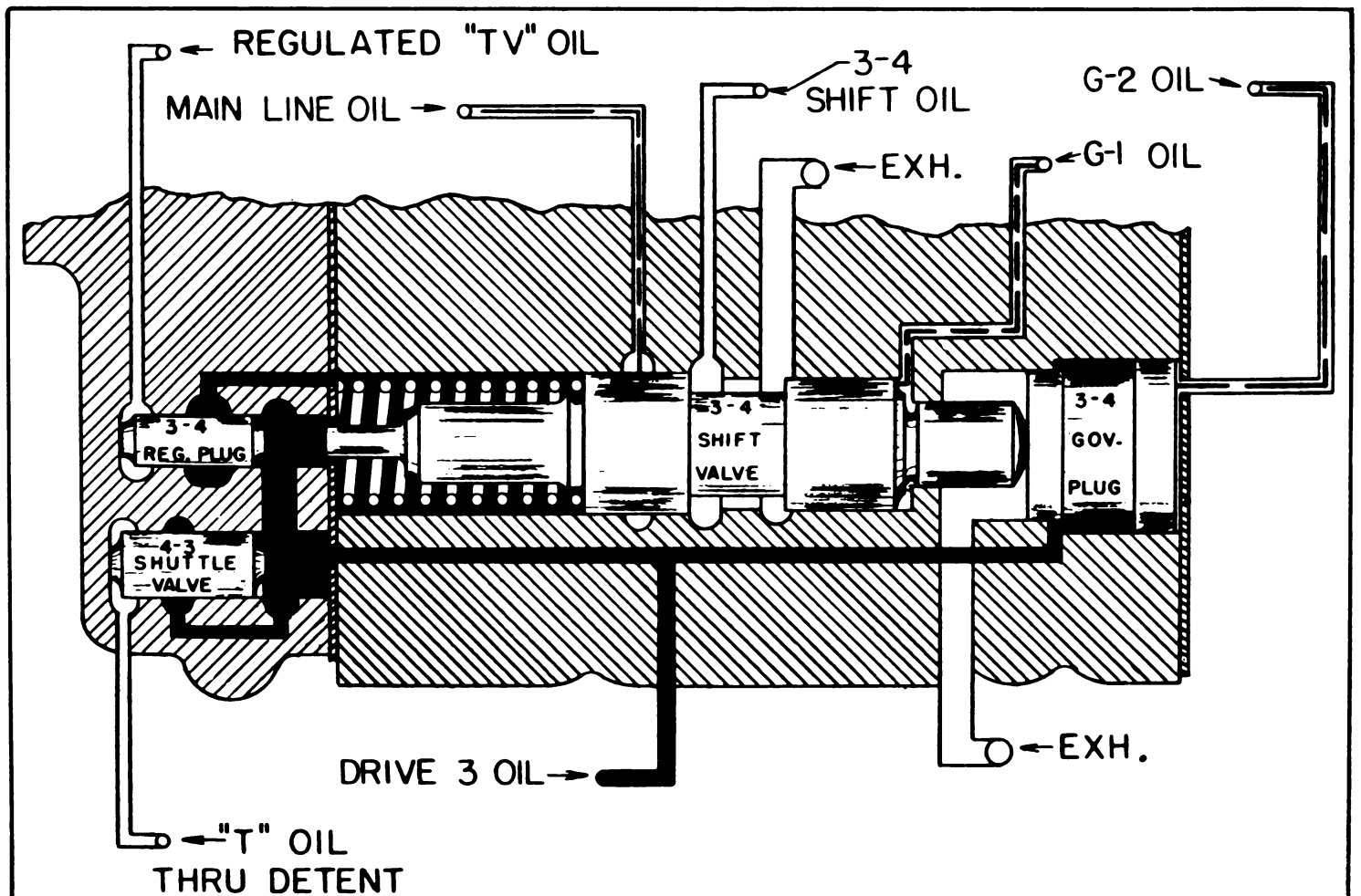


FIGURE 9—Drive 3—3rd Speed

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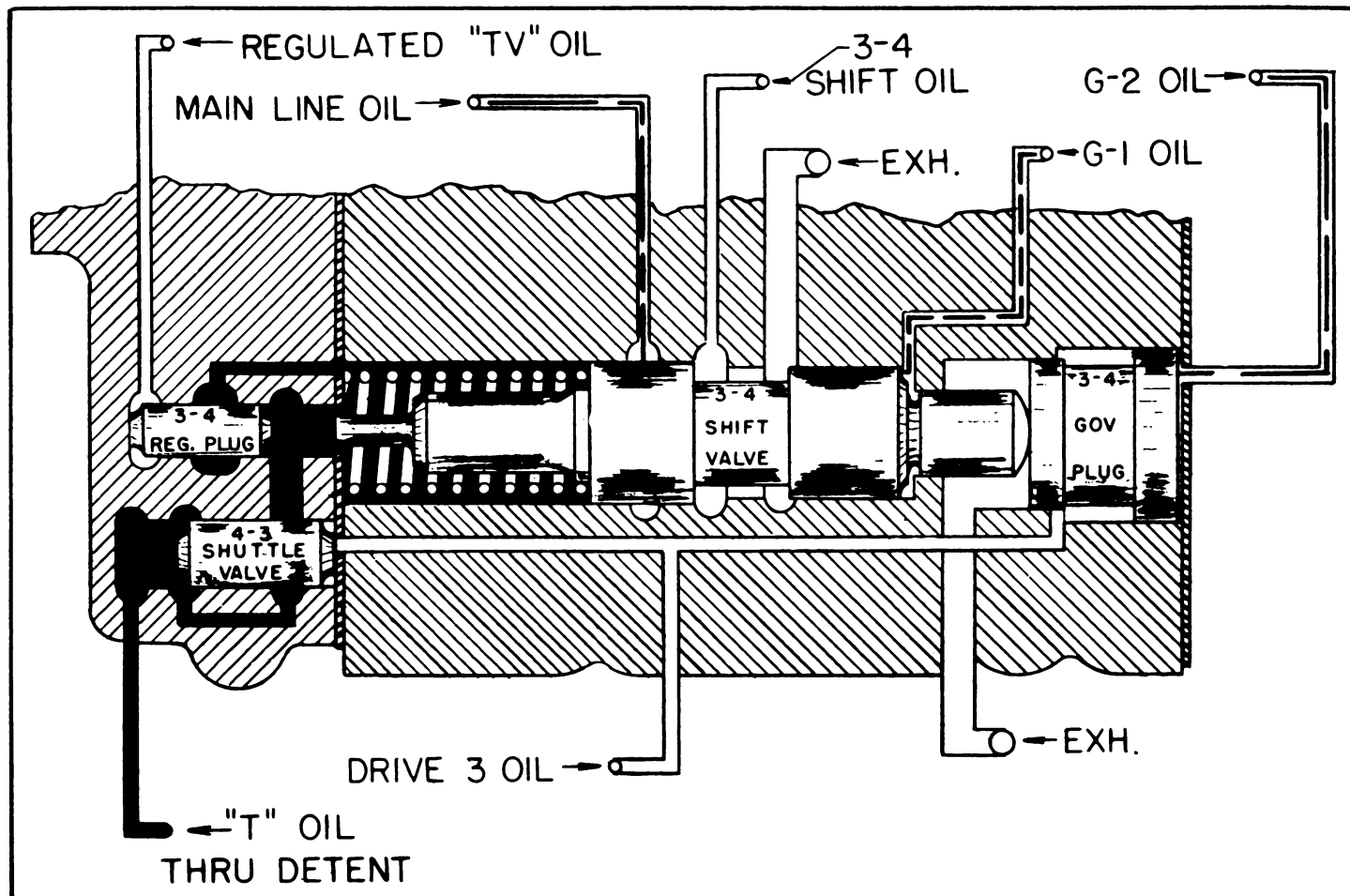


FIGURE 10—Drive 4—3rd Speed

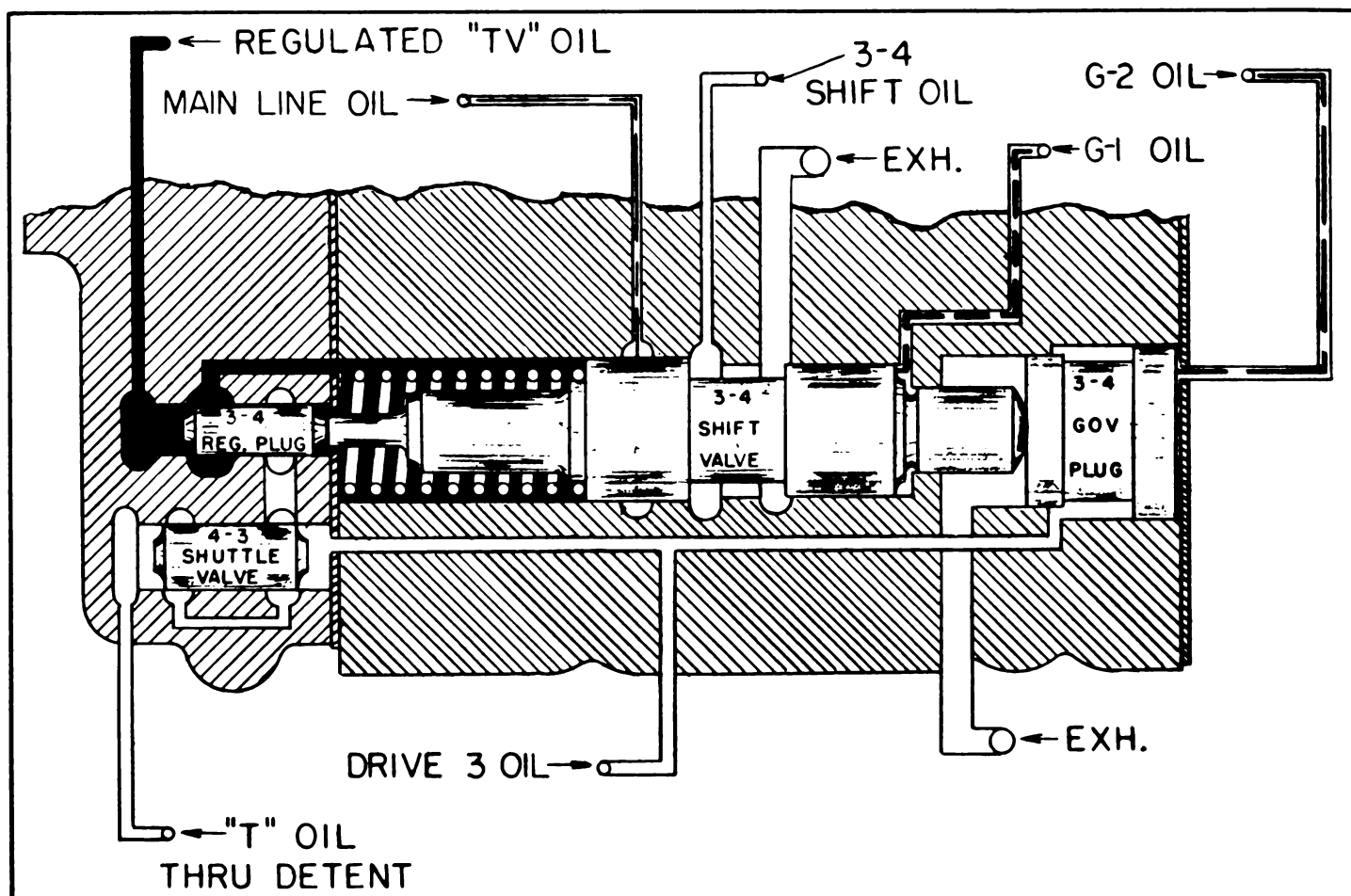


FIGURE 11—Drive 4—3rd Speed

BRAKES AND WHEELS

SECTION

BRAKE SPECIFICATIONS

Series	"Ambassador"	"Statesman"	"Rambler"
Type of Mechanism	Lockheed Hydraulic	Lockheed Hydraulic	Lockheed Hydraulic
Make	Bendix Servo	Bendix Floating Shoe	Bendix Floating Shoe
Total Foot Braking Area	171 Sq. Inch	132 Sq. Inch	92 Sq. Inch
Lining Size — Width x Length			
Primary — Front	2" x 9"	2" x 9 $\frac{7}{8}$ "	1 $\frac{3}{4}$ " x 8"
Rear	2" x 9"	2" x 9 $\frac{7}{8}$ "	1 $\frac{1}{4}$ " x 8"
Secondary — Front	2 $\frac{1}{2}$ " x 11 $\frac{3}{32}$ "	1 $\frac{3}{4}$ " x 7 $\frac{5}{8}$ "	1 $\frac{1}{2}$ " x 8"
Rear	2" x 11 $\frac{3}{32}$ "	1 $\frac{3}{4}$ " x 7 $\frac{5}{8}$ "	1" x 8"
Clearance, Toe, Inches	.015"	Eccentric Adj.	Eccentric Adj.
Clearance, Heel, Inches	.015"	Eccentric Adj.	Eccentric Adj.
Pedal Free Play	$\frac{1}{4}$ " to $\frac{1}{2}$ "	$\frac{1}{4}$ " to $\frac{1}{2}$ "	$\frac{1}{4}$ " to $\frac{1}{2}$ "
Drum Diameter, Inches	10"	9"	8"
Wheel Cylinder	Straight Bore	Straight Bore	Straight Bore
Front Cylinder Bore, Diameter	1 $\frac{1}{16}$ "	1"	1"
Rear Cylinder Bore, Diameter	1 $\frac{5}{16}$ "	$\frac{7}{8}$ "	1 $\frac{3}{16}$ "
Master Cylinder Bore, Inches	1 $\frac{1}{8}$ "	1"	1"
Piston Clearance, Wheel and Master Cylinder, Inches	.001" to .003"	.001" to .003"	.001" to .003"

WHEELS AND TIRES

Series	"Ambassador"	"Statesman"	"Rambler"
Wheel Size	15"	15"	15"
Tire Size			6.40 x 15"
Standard	7.10 x 15"	6.70 x 15"	(Custom Series) 5.90 x 15"
			(Super and Deluxe Series)
Tire Pressure, Cold, Front and Rear Wheels	24 lbs.	24 lbs.	24 lbs.

REAR AXLE SECTION

The 1953 “Ambassador,” “Statesman,” and “Rambler” Series rear axle design and service procedures remain the same as the prior Series.

SPECIFICATIONS FOR NASH REAR AXLES

	“Ambassador” Series	“Statesman” Series	“Rambler” Series
Type	Semi-Floating	Semi-Floating	Semi-Floating
Drive Gear	Hypoid	Hypoid	Hypoid
Ring Gear and Pinion Backlash	.002” — .006”	.002” — .006”	.002” — .006”
Axle Shaft End Play	.002” — .004”	.002” — .004”	.002” — .004”
Pinion Shaft Bearing Tension	15” lbs. — 18” lbs.	12” lbs. — 14” lbs.	12” lbs. — 14” lbs.
Pinion Bearing Adjustment	Shims	Shims	Shims
Differential Side Bearing Pre-Load	.004” — .006”	.004” — .006”	.004” — .006”
Differential Side Bearing Adjustment	Shims	Shims	Shims
Axle Shaft End Play Adjustment	Shims	Shims	Shims
Lubrication Capacity	4 pts.	3 pts.	3 pts.
Type of Lubricant	SAE 90 HYPOID*	SAE 90 HYPOID*	SAE 90 HYPOID*
Rear Axle Ratio (Standard)	4.1-1 (10-41)	4.4-1 (8-35)	3.8-1 (9-34)
Rear Axle Ratio (With Overdrive)	4.4-1 (9-40)	4.9-1 (8-39)	4.4-1 (8-35)
Rear Axle Ratio (With Automatic)	3.2-1 (13-41)	3.3-1 (13-43)	

*NOTE: Hypoid rear axle lubricant is to be used in all new assemblies or following the installation of replacement parts.

After the rear axle has been run-in, or at the recommended drain and re-fill period, an SAE #90 All-Purpose, Multi-Purpose, or other brand designation lubricant may be used as long as it is

suitable for Hypoid Rear Axle Service. Naturally, the results of such use are the responsibility of the lubricant supplier or servicing dealer.

“AMBASSADOR” SERIES REAR AXLE TORQUE CHART

Description	Recommended Torque (All Parts Clean and Dry)
Ring Gear to Case Screw.....	50-55 Foot Pounds
Differential Bearing Cap Screw.....	105-110 Foot Pounds
Drive Pinion Nut.....	100-135 Foot Pounds
Wheel to Hub Bolt.....	70-80 Foot Pounds
Rear Brake Support	
Plate Screw Nut.....	50-55 Foot Pounds
Rear Wheel Hub to Shaft Nut.....	180-190 Foot Pounds
Torque Tube to Rear Axle Stud Nut..	40-45 Foot Pounds
Rear Axle Truss Rod Stud	
Nut (Front)	70-80 Foot Pounds
Rear Axle Truss Rod Stud	
Nut (Rear)	50-55 Foot Pounds
Propeller Shaft Coupling Flange	
Screw Nut	30-35 Foot Pounds

“STATESMAN” AND “RAMBLER” SERIES REAR AXLE TORQUE CHART

Description	Recommended Torque (All Parts Clean and Dry)
Ring Gear to Case Screw.....	45-50 Foot Pounds
Differential Bearing Cap Screw.....	55-60 Foot Pounds
Propeller Shaft Coupling Nut.....	250-300 Foot Pounds
Rear Axle Drive Pinion Nut.....	90-95 Foot Pounds
Rear Brake Support	
Plate Screw Nut.....	30-35 Foot Pounds
Rear Hub to Shaft Nut.....	160-165 Foot Pounds
Wheel to Hub Nut.....	70-80 Foot Pounds
Rear Spring Clip Nut (Rambler)....	70-75 Foot Pounds
Rear Spring Front Eye Bushing	
Bolt Nut (Rambler).....	35-40 Foot Pounds
Rear Axle Truss Rod Stud Nut.....	50-60 Foot Pounds
Rear Axle Truss Rod Nut (Rear)...	20-25 Foot Pounds
Rear Axle Truss Rod Bracket	
Clamp Nut	35-40 Foot Pounds
Rear Axle Truss Rod Nut (Front)...	20-25 Foot Pounds
Torque Tube to Rear	
Axle Stud Nut.....	40-45 Foot Pounds

FRONT SUSPENSION AND STEERING GEAR SECTION

SPECIFICATIONS:

	"Ambassador" Series	"Statesman" Series	"Rambler" Series
Turning Angle	$23^{\circ} + \frac{1}{2}^{\circ} - 0^{\circ}$	$23\frac{1}{2}^{\circ} + \frac{1}{2}^{\circ} - 0^{\circ}$	$22\frac{1}{2}^{\circ} + \frac{1}{2}^{\circ} - 0^{\circ}$
Kingpin Angle	$6\frac{1}{2}^{\circ}$	$6\frac{1}{2}^{\circ}$	$8\frac{1}{2}^{\circ}$
Caster Angle	0° to $\frac{1}{2}^{\circ}$ Pos. $\frac{1}{2}^{\circ}$ Desired	0° to $\frac{1}{2}^{\circ}$ Pos. $\frac{1}{2}^{\circ}$ Desired	$\frac{3}{4}^{\circ}$ to $1\frac{1}{4}^{\circ}$ Pos. 1° Desired
Camber Angle	$\frac{1}{4}^{\circ}$ Neg. to $\frac{1}{4}^{\circ}$ Pos. 0° Desired	$\frac{1}{4}^{\circ}$ Neg. to $\frac{1}{4}^{\circ}$ Pos. 0° Desired	$\frac{1}{4}^{\circ}$ to $\frac{3}{4}^{\circ}$ Pos. $\frac{1}{2}^{\circ}$ Desired
Toe-In	$\frac{1}{16}''$ to $\frac{3}{16}''$	$\frac{1}{16}''$ to $\frac{3}{16}''$	$\frac{1}{8}''$ to $\frac{1}{4}''$ $\frac{1}{4}''$ Desired

TORQUE TIGHTENING SPECIFICATIONS

	"Ambassador" and "Statesman" Series	"Rambler" Series
Upper Mounting Bolt to Side Sill-Nut	35-45	75-85
Lower Mounting Bolt to Side Sill-Nut	75-85	45-50
Upper Control Arm Pivot Bar to Mounting Bolt-Nut	75-85	
Lower Control Arm Pivot Bar to Mounting Bolt-Nut	75-80	45-55
Pivot Bar Bushing Retaining Nut	75-85	75-85
Lower Control Arm Spacer Screw Nut	90-95	90-95
Upper Control Arm Trunnion Screw Nut		40-60
Front Suspension Brace Bolt	85-100	85-100
Wheel to Hub	70-80	70-80
Steering Wheel Nut	25-30	25-30
Pitman Arm Nut	75-80	75-80

POWER STEERING

Hydraulic Power Steering is being introduced on the 1953 Nash "Ambassador" Series.

Power Steering is a method of using hydraulic forces, controlled by mechanical linkage, to perform the driver's manual work of steering or turning the front wheels of the car.

Power Steering is accomplished in such a manner that the driver has a constant "feel" similar to that of normal steering. This "feel" is proportional in all ways to the normal steering operation, but is "toned down" to require less effort on the part of the driver.

Power Steering also reduces the road shock which results in wheel fight. The net result is less driver fatigue, increased steering safety, and long life

of the steering gear as wheel loads are not transmitted to the steering gear or steering wheel.

The Power Steering System used is a linkage type, that is, the units are mounted as part of the steering linkage. The ease of service accessibility of the major components is one of many advantages of the linkage type system.

THEORY OF OPERATION

The Power Steering System consists of an oil supply reservoir, an engine driven pump, oil flow control valve, oil pressure relief valve, control valve, and power cylinder.

The reservoir is mounted on the upper right side of the engine. It contains a filter element to prevent the circulation of dirt in the system. The

NASH TECHNICAL SERVICE MANUAL

system is also vented and filled at this point (Fig. 1).

The pump is an engine belt driven, rotor type pump which is designed for high pressure output plus sufficient volume to perform steering operations under all conditions (Fig. 1).

The relief valve is located in the pump and is preset to 700 to 900 P.S.I. This valve is used to prevent excessive pressure to build up in the system which may damage parts.

The flow control valve is also located in the pump. The valve is used to control the maximum volume output of the pump at high pump speeds. Excessive pump volume would result in excessive hydraulic noise and overheating of the oil.

The control valve is attached to and is part of the drag link of the steering linkage. This unit is the "brain" of the entire system and responds to every movement of the steering wheel or the front wheels (Fig. 1).

The power cylinder is attached to the body side sill and the drag link. Hydraulic pressure directed by the control valve operates the power cylinder and assists the driver when steering the car (Fig. 1).

Oil is supplied to the engine driven pump from the oil reservoir. Oil is then directed to the inlet port of the control valve. The control valve consists of a housing which has necessary passages

and a precision bore with a series of lands and grooves. Located in this bore is a movable valve called a spool. This spool which also has lands and grooves is attached to the ball socket for the pitman arm. The spool and socket are able to move laterally as an assembly .120" in the housing bore. The average movement during operation is approximately .015".

The oil pressure seats a ball check located in the housing of the control valve. With the control valve in the centered position, the lands and grooves index in such a manner that oil pump pressure is directed equally to both sides of the power cylinder. The center land of the spool is also indexed with the center groove of the housing to return oil pump pressure to the reservoir (Fig. 2). Therefore, when the control valve is in a centered position, there is relatively no pressure existing in the system.

This system is commonly called an open center system. The oil pressure in the system is variable. The greater the effort required to turn the wheels the more pressure the pump will put out, and the greater the power assistance until the relief valve is opened.

When a left turn is made, the pitman arm moves the spool to the right from the centered position (Fig. 3).

The return port is blocked on the right side of

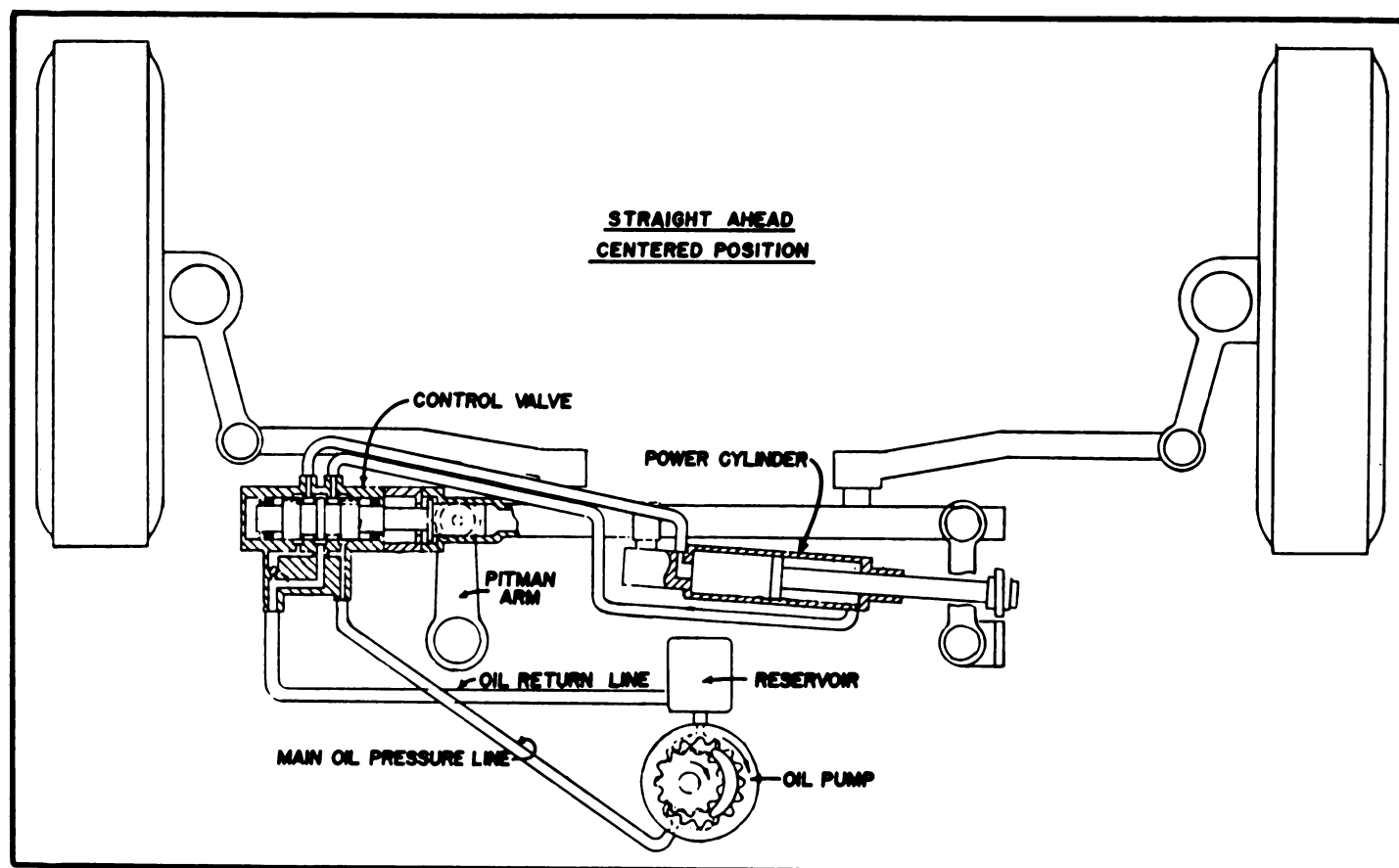


FIGURE 1
POWER STEERING LINKAGE

FRONT SUSPENSION AND STEERING GEAR SECTION

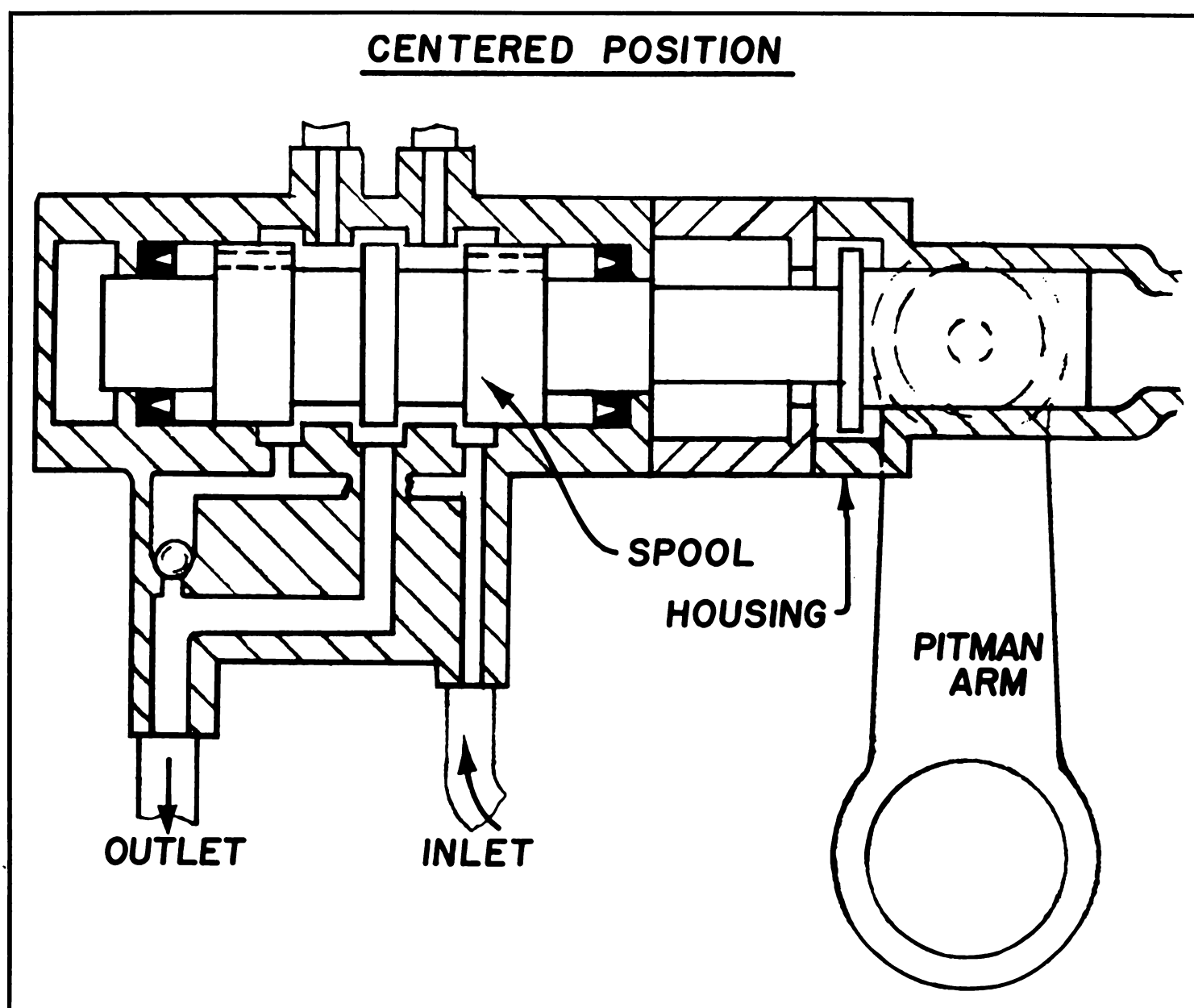


FIGURE 2
CONTROL VALVE CENTERED POSITION

the spool and the pressure port is blocked on the left side. Oil pressure is then directed to the power cylinder to perform the work of moving the linkage. The oil displaced from the power cylinder is returned to the control valve, then through the return port to the reservoir.

The operation for a right turn is the same only the control valve is moved to the left by the pitman arm, opening the opposite passages (Fig. 4). This method of using hydraulic force to perform the heavy work provides easy steering to the driver. However, a reactionary feature is incorporated which gives the driver that *all important sense of "feel."*

Oil passages are located in the spool which direct oil to the outer ends of the spool (Fig. 5).

When oil pressure is present to operate the power cylinder, oil pressure is also present on the end of the spool forcing the spool to the centered position.

This opposes the driver's effort which is trying to force the spool "off" of the centered position (Fig. 3).

The reactionary force is a hydraulic force the driver must overcome when the steering wheel is turned. Reactionary force is also variable depending on the pressure existing in the system; if there is greater resistance at the wheels, more pressure will be required to turn the wheels. Therefore, more reactionary force will be present so the driver will meet a greater resistance when turning the wheel. Thus a variable and proportional steering "feel" is obtained for the driver. Up to this point, only the operation of the driver steering the car has been covered.

Power Steering is also effective to correct for road shock.

A bump or rut deflects the front wheels and moves the linkage accordingly, and this movement would be transmitted to the steering gear, thence to the

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steering wheel. Since the control valve housing is part of the linkage, this movement of the linkage also moves the control valve housing. The spool in the housing is held in position by the steering gear.

NOTE: Previously it was pointed out that the spool was moved by the steering gear pitman arm. Therefore, steering operations move the spool in the housing. Road shock or front wheel deflection moves the housing on the spool.

For Example: A rut deflects the front wheel to the right. This movement of the linkage is to the left so the housing is moved to the left. Since the spool has not moved, the passages for a left turn are opened and the road deflection is corrected (Fig. 6).

The same reaction is true for a deflection to the left (Fig. 7). Thus, road shock is dampened and corrected before the steering gear and steering wheel is affected.

What happens if power steering is not operating? Normally the system will be full of oil, but no pressure present.

The steering gear is turned to accomplish a turn. The control valve is moved out of the center position. Oil is forced from the power cylinder to the control valve through the return passages. Since the pump pressure is not present, the oil being forced out of the power cylinder actually has some pressure and unseats the ball check in the control valve. With the valve off its seat, oil is then permitted to be displaced from one side of the power cylinder to the other (Fig. 6). This results in normal manual steering.

PRELIMINARY SERVICE INFORMATION

Power Steering Control Valve

The control valve housing and the spool are machined to very close tolerances and require

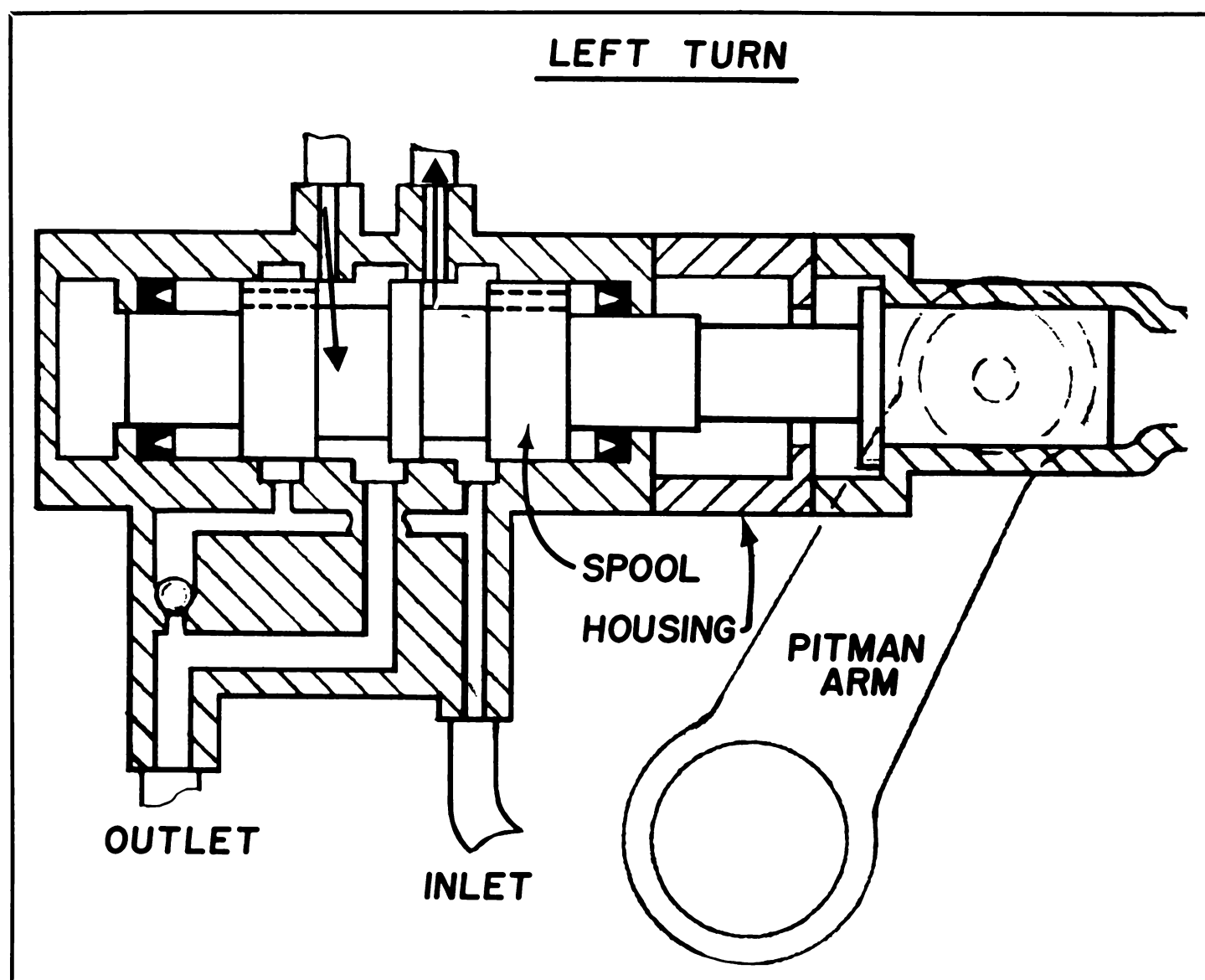


FIGURE 3
CONTROL VALVE SPOOL MOVED TO RIGHT FOR LEFT TURN

FRONT SUSPENSION AND STEERING GEAR SECTION

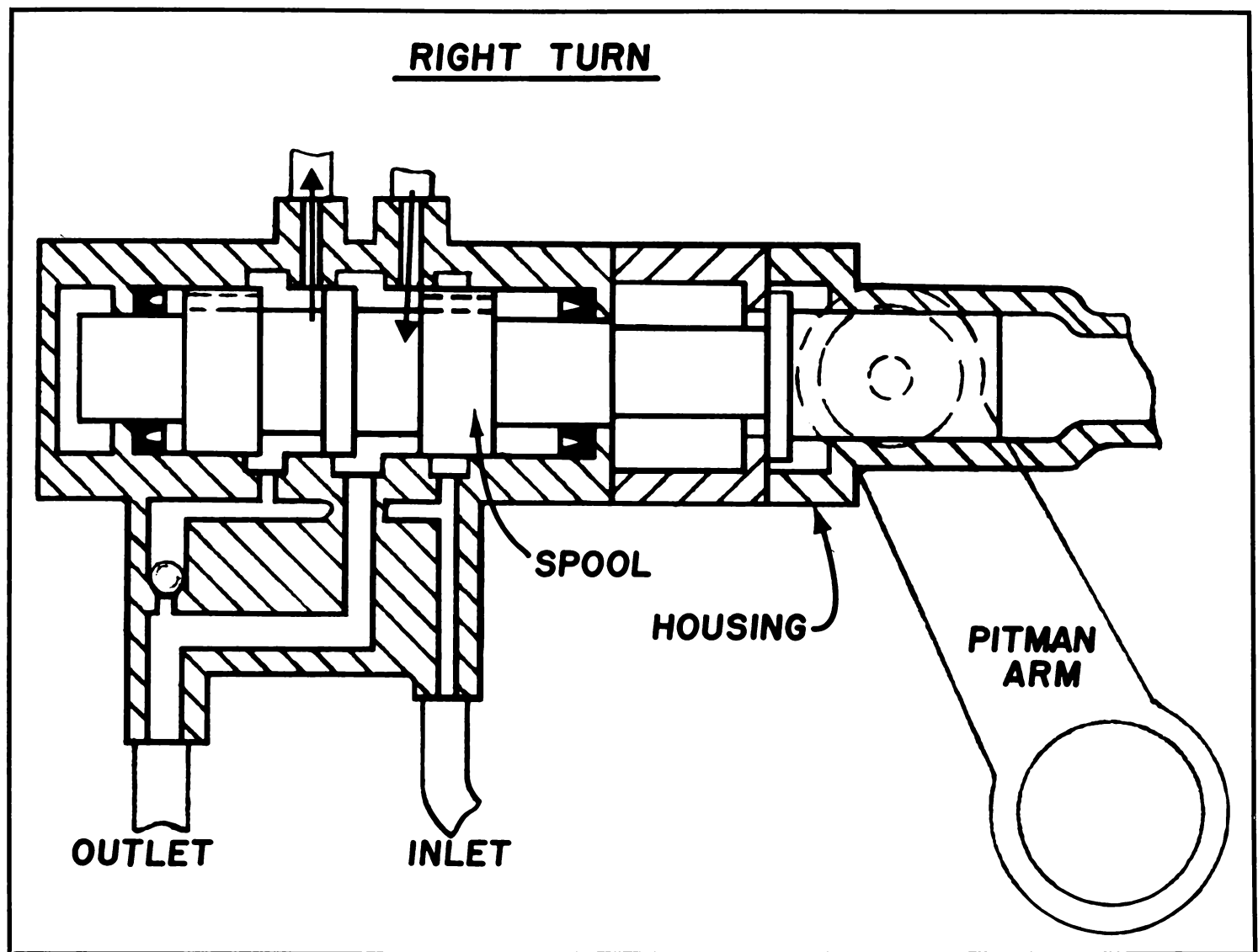


FIGURE 4
CONTROL VALVE SPOOL MOVED TO LEFT FOR RIGHT TURN

select fitting at the time of assembly. Therefore, the control valve and spool will be supplied for service as a unit.

The only maintenance performed on the control valve will be the replacement of seals, fitting seats, and the ball check assembly in the housing. Linkage component parts will also be supplied for the pitman arm socket assembly.

DO NOT USE GASKET CEMENT OR SEALERS WHEN ASSEMBLING THE CONTROL VALVE OR FITTINGS.

Power Steering Power Cylinder

The power cylinder is attached to a bracket on the side sill and the drag link of the steering linkage.

The piston has two piston rings and is attached to the rod with a self-locking nut. When replacing the power cylinder piston rings, it is also recommended that a new piston be used due to the precision fit of the rings in the grooves. The rod is chromium plated to resist corrosion.

An oil seal and scraper disc seals the power cylinder at the point where the rod operates.

Bleed passages and check valves are located in the power cylinder to prevent the high oil pressures from overloading the oil seal. Oil pressure that seeps past piston rod enters the bleed passages and are directed to the return line and then to the reservoir.

Power Steering Pump

The pump is an Eaton Rotor type pump which is capable of very high pressures as well as adequate volume to perform the necessary steering operations under all conditions.

The rotor set consists of inner and outer members which have specially designed tooth contours.

The inner rotor is keyed to the pulley drive shaft and drives the outer rotor in the off-set bore.

The tooth contour permits a rolling and sliding contact against each other. When the rotors are turned, cavities are opened and closed between the teeth. The action of this pump is both smooth and uniform.

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The developed tooth form also provides quiet operation and long life because of the absence of shock loads.

The pump was designed to deliver high pressure and volume at low engine speeds because the greatest demand for power steering operation occurs when parking or driving slow. As a result, at higher engine speeds, the pump would deliver more volume and pressure than is necessary.

An oil flow control valve incorporated in the pump controls the volume output of the pump to prevent excessive hydraulic noises as well as overheating of the oil.

The flow control valve maintains approximately two (2) gallons per minute output.

To prevent excessive pressure from damaging parts, a relief valve is also incorporated in the pump. The relief valve is set to approximately 700-900 pounds per square inch.

The following is a list of parts in the order that

they may be expected to wear sufficiently to require service:

- | | |
|-------------------------|---|
| 1. Oil Seal | 7. Rotor Drive Shaft Key |
| 2. Rotors | 8. Drive Shaft Ball Bearing |
| 3. Cover Shaft Bushing | 9. Relief and Flow Control Valve Components |
| 4. Rotor Pocket Bushing | |
| 5. Face of cover | |
| 6. Face of Body | |

The pump parts must be very clean. Do not wipe the parts with a cloth for cleaning.

The rotors should be nested in the housing in the same position they were operating. Using a wire gauge, check the tooth nose clearance which should not exceed .008". The side play between the rotors should not exceed .0025".

Rotors will be supplied as matched sets and should be replaced in sets only.

If the shaft bushing, pocket bushing, cover face, or body face are excessively worn, a complete

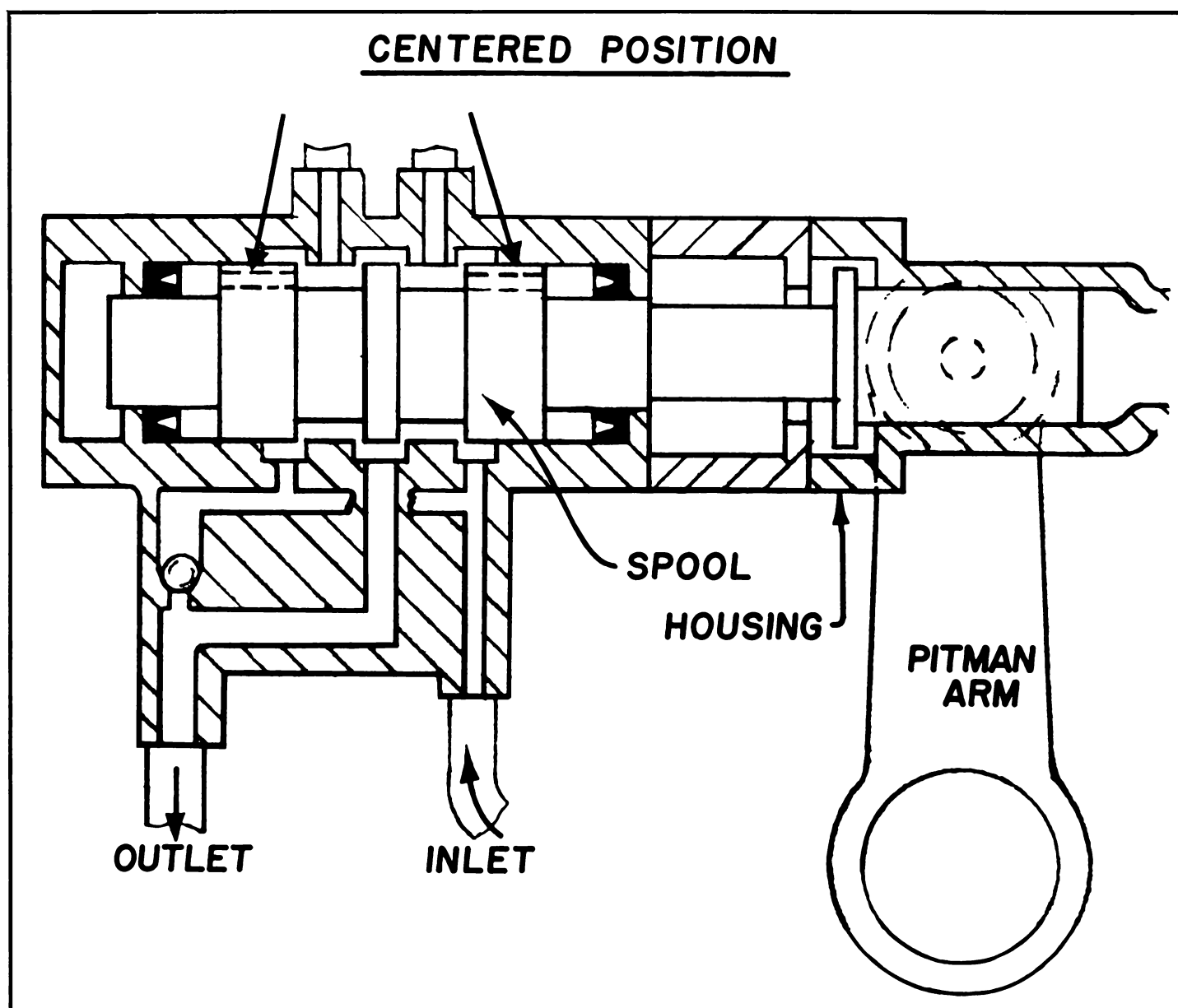


FIGURE 5
CONTROL VALVE REACTIONARY OIL PASSAGES

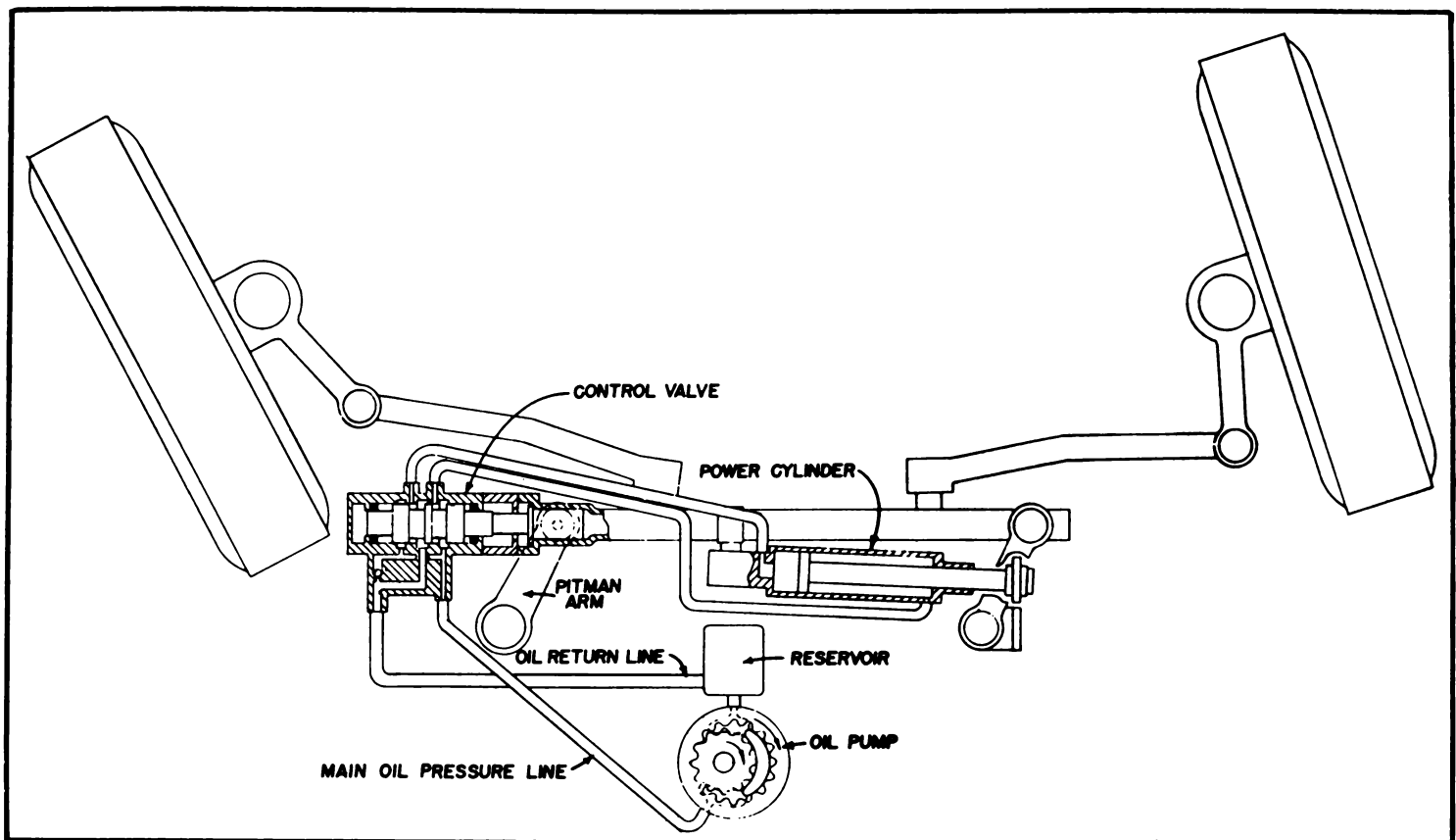
FRONT SUSPENSION AND STEERING GEAR SECTION

FIGURE 6
POWER STEERING LINKAGE
LEFT TURN POSITION

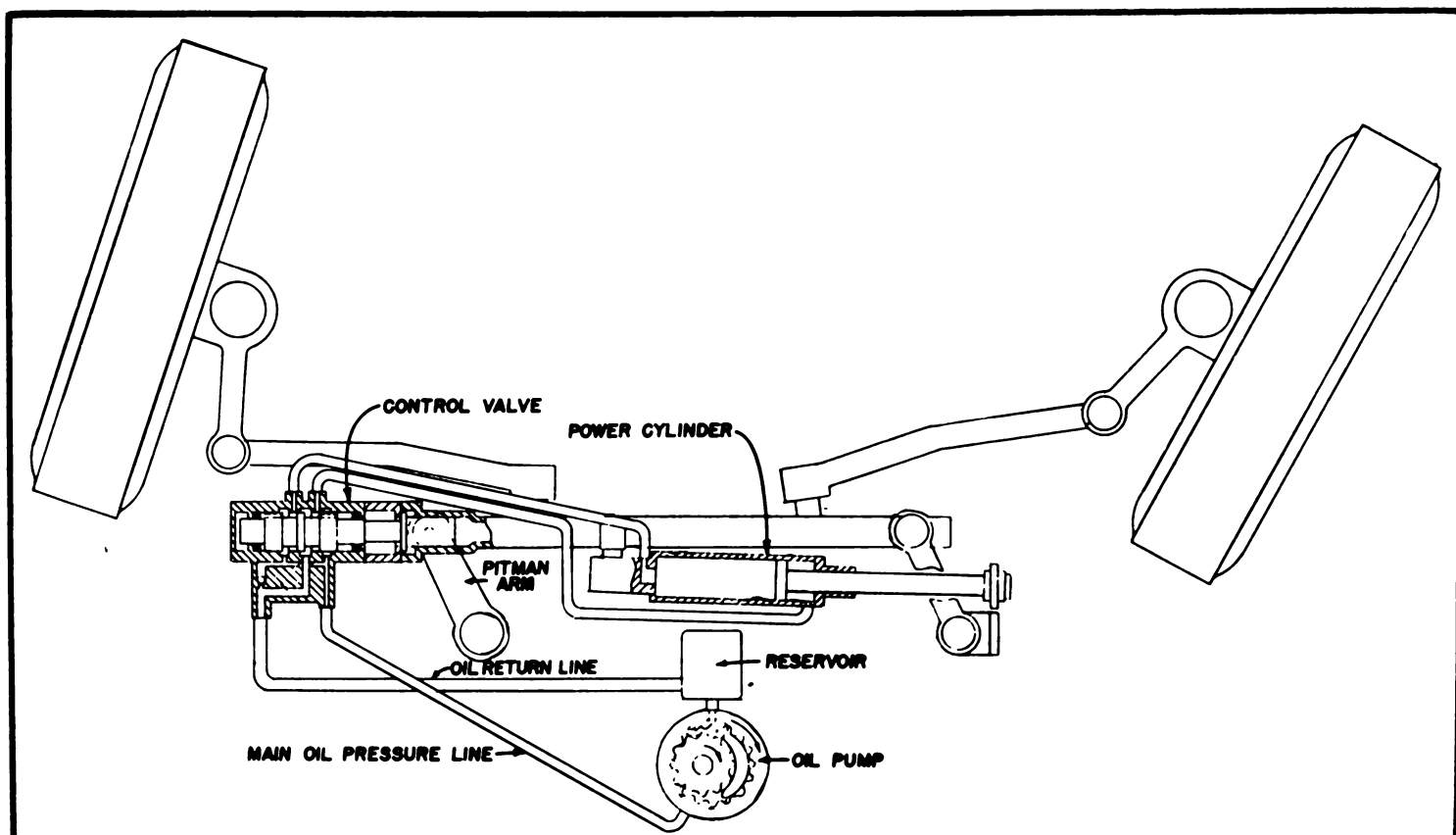


FIGURE 7
POWER STEERING LINKAGE
RIGHT TURN POSITION

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body cover sub-assembly should be used as the above parts are supplied with the assembly.

The relief and flow control valves should be inspected for free movement in the bore. Remove all burrs with crocus cloth to correct.

Always use new gaskets when assembling the pump. However, do not use gasket cement compounds.

Lubricate all parts as they are assembled.

Torque the cover bolts 30-35 foot pounds.

Always rotate the pump at least 12 revolutions by hand prior to installing in the car.

General Service Information

Oil level should be maintained 1" below the top of the oil reservoir. Use Hydra-Matic fluid only as other fluids may cause excessive foaming or unstable steering operation.

The linkage and points of attachment of the various units should be maintained tight or properly adjusted to insure proper operation. Looseness of the linkage will cause erratic action due to the sensitivity of the control valve.

The pump drive belt should be sufficiently tight to prevent slippage because of the high pressure type pump.

Two adjustments are provided to properly adjust the belt tension and belt pulley alignment.

Whenever lines were disconnected for service operations, bleed the system by making complete power turns both left and right. Then recheck the oil level in the reservoir.

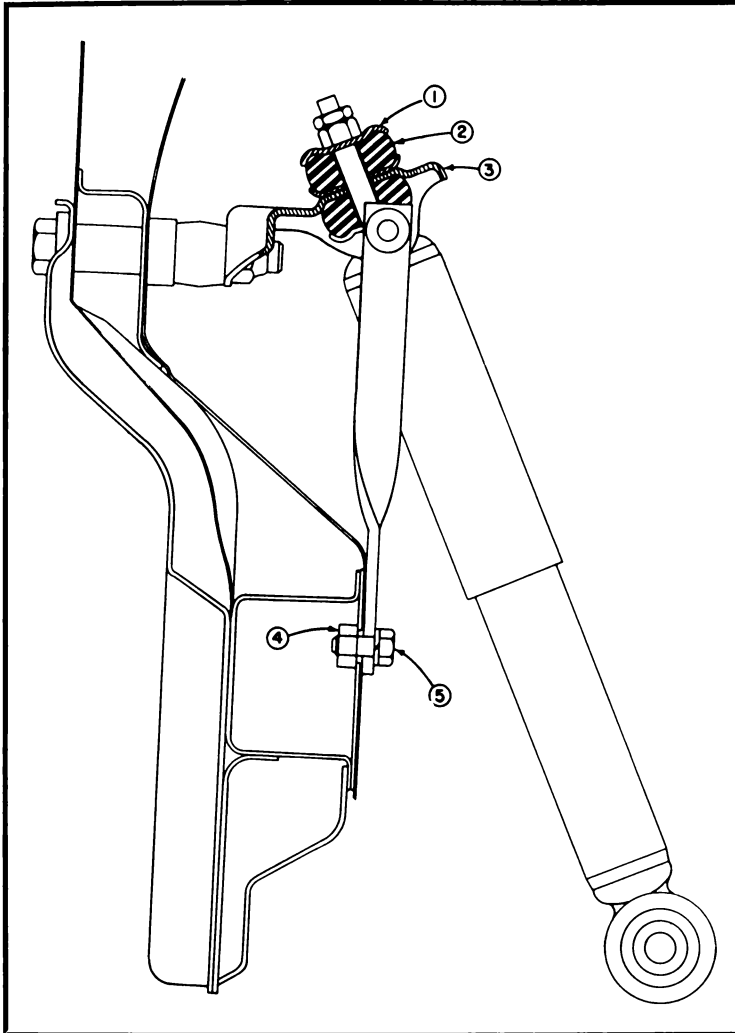
DETAILED SERVICE PROCEDURES AND SPECIAL TOOLS WILL BE AVAILABLE AT A LATER DATE.

RUNNING GEAR SECTION

“Rambler” Series

Front Shock Absorber Mounting

The redesign of the front shock absorber to utilize a “Bayonet” type upper mounting is continued in the 1953 Series.



1. Shock Absorber Grommet Retainer
2. Shock Absorber Grommet
3. Shock Absorber Upper Mounting Bracket
4. Shock Absorber Bracket Brace Screw Clinch Nut
5. Shock Absorber Bracket Brace Screw

FIGURE 1
Front Suspension Upper
Shock Absorber Mounting (Sectional View)

“Rambler” Series

Rear Shock Absorber Mounting

The revision in rear shock absorber mounting to eliminate the shock absorber housings (towers) in the body floor pan is continued in the 1953 Series.

The upper mounting is accessible for service by removing two access hole covers in the rear floor pan (Figs. 2 and 3).

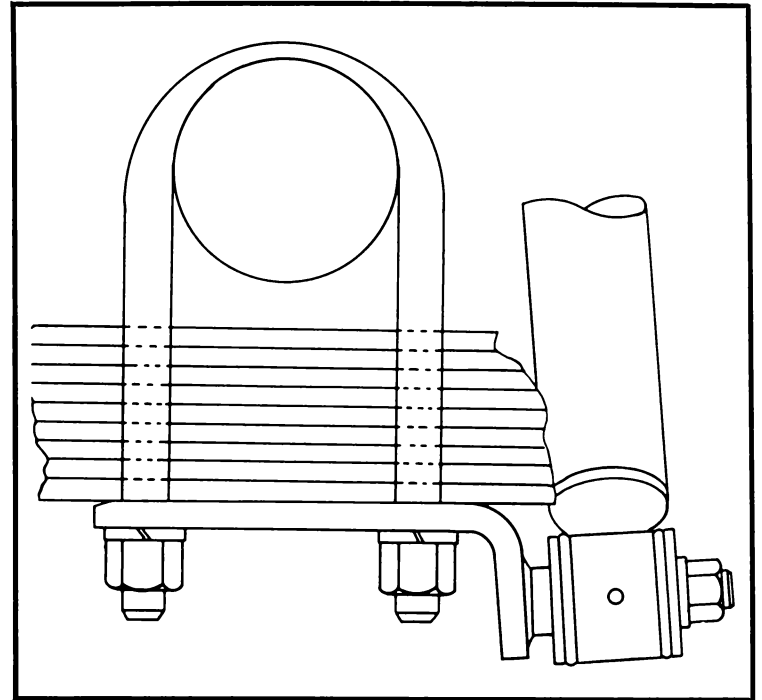


FIGURE 2
REAR LOWER SHOCK ABSORBER MOUNTING

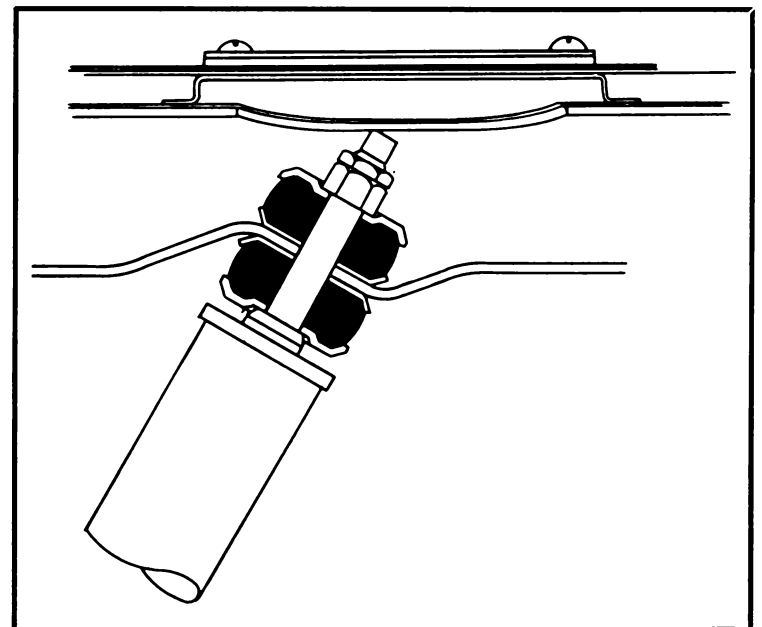


FIGURE 3
REAR UPPER SHOCK ABSORBER MOUNTING

BODY SECTION

“AMBASSADOR” AND “STATESMAN” SERIES

The already public approved lines and styling of the “Ambassador” and “Statesman” Series have been further improved by the addition of exterior coloring and interior trim design changes and new designed upholstery.

This has been accomplished by the addition of several chrome plated sectors evenly spaced at the opening of the Weather Eye air intake cover panel screen which extends the full width of the body.

The addition of this beauty treatment changes the design of the ventilator screen as well as the cowl top panel to which the sectors are fastened. The new exterior coloring in new tone shades of green, blue, maroon, grey and red, through the addition of seven (7) new paint colors combined with nine (9) prior most popular colors, provides a choice of thirteen (13) different solid paint colors, and thirteen (13) two-tone combinations. The interior trim design changes with new designed upholstery in colors harmonizing with the exterior paint colors, have also been added.

Other added interior features available on some models are:

Paint colors of all mouldings in new Stone Grey Metallic.

New Smoky Green—Plexiglass Sun Visors.

A package net, the full width of the body across the top of the windshield, behind the sun visors. It is colored to harmonize with the car ceiling trim upholstery, and is so installed behind the upholstery that only the front edge is exposed for convenience and access to place and remove much used articles.

New moulded front and rear compartment floor mats with design inserts in neutral and harmonizing Custom trim colors will be available.

“RAMBLER” SERIES

The 1953 “Rambler” Series will retain the 100” wheelbase.

The models of this Series will be as follows:

5321	Custom	2-Door	Soft Top Convertible
5327	Custom	2-Door	Country Club Sedan
5324	Custom	2-Door	Station Wagon
5314	Super	2-Door	Suburban
2304		2-Door	Deliveryman

All models have been redesigned to provide a similar appearance to the 1953 “Ambassador” and “Statesman” Series. This has been accom-

plished by raising and extending the front and rear fenders, then adding massive rear fender tail and stop lights, which give the appearance of added length to the complete car.

The hood has been lowered for better road vision. It has a built in engine compartment ventilator at the front. This harmonizes with the new design radiator grille and grille panel.

The Continental Tire Mount, which gives the appearance of added length, massiveness and balance to the complete car and provides additional luggage space in the trunk compartment will be available for the Custom Convertible and Country Club Sedan models.

Design changes in the cowl top and front body pillars provide for a much larger windshield glass, similar in design to the “Ambassador” and “Statesman” Series. This glass has been increased over the 1952 “Rambler” 21¹/₂” in height and 33³/₁₆” in length with an increase in vision from 580 sq. in. to 745 sq. in., or 165 sq. inches.

The air intake opening for the Weather Eye at the cowl top has been increased. The prior cowl ventilator hood has been redesigned to a cowl ventilator intake cover panel, which extends the full width of the cowl, similar to the “Ambassador” and “Statesman” Series.

A design change in the dash panel on the engine side is provided for a more accessible mounting of the Weather Eye heater core. The built in defroster channels have been removed from the dash panel. A fan housing is now welded to the dash panel, and defroster hoses, are now used on the inside of the body, similar to the “Ambassador” and “Statesman” Series.

The deck cover has been redesigned to accommodate a cylinder lock and an ornamental medallion bezel to serve as a handle. The lock and lock striker are the same as used on the “Ambassador” and “Statesman” Series.

The door outer panel has been changed whereby the trigger type door handle and key lock is the same as the “Ambassador” and “Statesman.”

The same type door lock, door lock striker and inside door handles as used on the “Ambassador” and “Statesman” models will be used on all “Rambler” models.

The door check has been completely redesigned to serve as a stop when opening the door. It is also provided with two coil springs to hold the door in an open position.

The instrument panel and instrument panel overlay has been redesigned presenting a streamlined effect. The control buttons and knobs are in the same location, however, the radio grille is incor-

BODY SECTION

porated into the instrument panel overlay. Small louvres are cut into the overlay for transmittal of sound, serving as a radio grille. The windshield wiper assembly has been changed from a cable driven unit to a direct link drive, similar in design to the "Ambassador" and "Statesman" Series. The windshield wiper motor and link assembly is now mounted to the dash panel, inside of the body behind the instrument panel. It is very accessible for service.

The armrests on Custom models have been changed from the flat type to the same curved design as used on the "Ambassador" and "Statesman" Custom models. Door armrests in all Custom models are being provided with steel supports as was incorporated in the 1952 "Ambassador" and "Statesman" Series. The new paint names and code numbers for the 1953 Series as well as those popular prior colors can be recognized from the following list:

CODE	PAINT NAME
1	Black
19	Cruiser Grey—Dark
20	Sea Mist Grey—Light
23	Champagne Ivory
37	Willow Green—Light
40	Sky Line Blue
42	Autumn Rust—Metallic
43	Anniversary Gold—Metallic
44	Caribbean Blue
45	New Hunter Green—Dark
46	New Village Green—Medium—Metallic
47	New Pingree Blue—Dark
48	New Horizon Blue—Medium—Metallic
49	New University Maroon—Dark
50	New Dawn Grey—Metallic
51	New Spanish Red

TWO-TONE COMBINATIONS

<i>Lower Body</i>	<i>Upper Body</i>
20-19 . . . 20—Sea Mist Grey	19—Cruiser Grey
37-45 . . . 37—Willow Green	45—New Hunter Green
45-37 . . . 45—New Hunter Green	37—Willow Green
47-40 . . . 47—New Pingree Blue	40—Sky Line Blue
40-47 . . . 40—Sky Line Blue	47—New Pingree Blue
23-42 . . . 23—Champagne Ivory	42—Autumn Rust—Metallic
23-1 . . . 23—Champagne Ivory	1—Black
23-43 . . . 23—Champagne Ivory	43—Anniversary Gold—Metallic
50-42 . . . 50—New Dawn Grey—Metallic	42—Autumn Rust—Metallic
1-51 . . . 1—Black	51—New Spanish Red
51-1 . . . 51—New Spanish Red	1—Black
20-51 . . . 20—Sea Mist Grey	51—New Spanish Red
44-23 . . . 44—Caribbean Blue	23—Champagne Ivory

INTERIOR FINISH

Stone Grey—Metallic

LUBRICATION SECTION

1953 SERIES NASH LUBRICATION

Location	Lubricant	Mileage Interval	"Ambassador" Series	"Statesman" Series	"Rambler" Series
Front Suspension	Chassis Lubricant	1,000	9 Oilers	9 Oilers	11 Oilers
Power Steering Unit	Hydra-Matic Fluid Maintain Level 1" Below Top of Oil Reservoir	1,000 Check	x		
Battery		1,000 Check Level	x	x	x
Gear Shift Lever	Chassis Lubricant	5,000	1 Oiler	1 Oiler	1 Oiler
Steering Gear	SAE 90 Steering Gear Lubricant	3,000	Plug	Plug	Plug
Water Pump	Water Pump Lubricant	5,000	1 Oiler	1 Oiler	1 Oiler
Air Cleaner Dry Type	Engine Oil	2,000	Clean & Reoil	Clean & Reoil	Clean & Reoil
Oil Bath Type	Engine Oil	5,000	Follow Label	Follow Label	Follow Label
Generator	Light Engine Oil	5,000	2 Oil Cups	2 Oil Cups	2 Oil Cups
Starter	Light Engine Oil	5,000	2 Oil Cups	1 Oil Cup	1 Oil Cup
Engine Oil Pan	Engine Oil	2,000 Drain & Refill SAE 20 or 20W SAE 10W SAE 5W	6 Qts.	4 Qts.	4 Qts.
	Above 32° F. Below 32° F. Sub Zero				
Crankcase Breather	Engine Oil	5,000 Clean & Reoil	x	x	x
Distributor	Petroleum Jelly	1,000	x	x	x
	Wipe on breaker cam				
	Light Engine Oil	5,000	x	x	x
	One drop on breaker pivot & breaker plate felt wick				
Front Wheel Bearings	Wheel Bearing Lubricant	10,000 Repack	x	x	x
Rear Axle Shaft Bearings	Wheel Bearing Lubricant	15,000 Repack	x	x	x
Rear Axle Drive Gears	SAE 90 Hypoid Oil At Regular Drain & Refill Period, Use Only SAE 90 Oil Suitable for Hypoid Gears	1,000 Check 10,000 Drain, Flush & Refill or Yearly	4 Pts.	3 Pts.	3 Pts.
Transmission and Overdrive	SAE 90 Mineral Gear Lubricant in Warm Weather. SAE 80 in Cold	1,000 Check 10,000 Drain & Refill	Regular 2¼ Pts. Overdrive 3½ Pts.	Regular 2¼ Pts. Overdrive 3½ Pts.	Regular 1½ Pts. Overdrive 2¾ Pts.
Hydra-Matic Transmission	Hydra-Matic Fluid	1,000 Check 25,000 Drain & Refill	11 Pts.	11 Pts.	
Master Cylinder	Lockheed 21-B Fluid	1,000 Check	x	x	x
Universal Joints	Chassis Lubricant	15,000 Repack	x	x	x

LUBRICATION SECTION

1953 SERIES NASH LUBRICATION

Location	Lubricant	Mileage Interval	"Ambassador" Series	"Statesman" Series	"Rambler" Series
Torque Tube Trunnion	Chassis Lubricant	5,000		1 Oiler	
Clutch Beam	Chassis Lubricant	1,000	x	x	x
Pedal Shaft	Chassis Lubricant	1,000	x	x	x
Throttle Shaft and Throttle Shaft Felt Wick	Engine Oil	1,000	x	x	x
Hand Brake Bell Crank	Engine Oil	1,000	x	x	x

MISCELLANEOUS

Cooling System

Maintain water level and expansion space. Add inhibitor. Drain and flush before adding anti-freeze. "Rambler" Series water pump drain only.

"Ambassador" Series

18 Qts.

"Statesman" Series

15 Qts.

"Rambler" Series

12 Qts.

(Quantities include 1 Qt. for cars equipped with Weather Eye.) Pressure cap 7 lbs. release pressure. Maintain expansion space.

Tires: 24 lbs. Check pressure when tires are cold.

